FOUNDED IN 1856

RAILWAY AGE

THE STANDARD RAILROAD WEEKLY FOR ALMOST A CENTURY

OCTOBER 8, 1951

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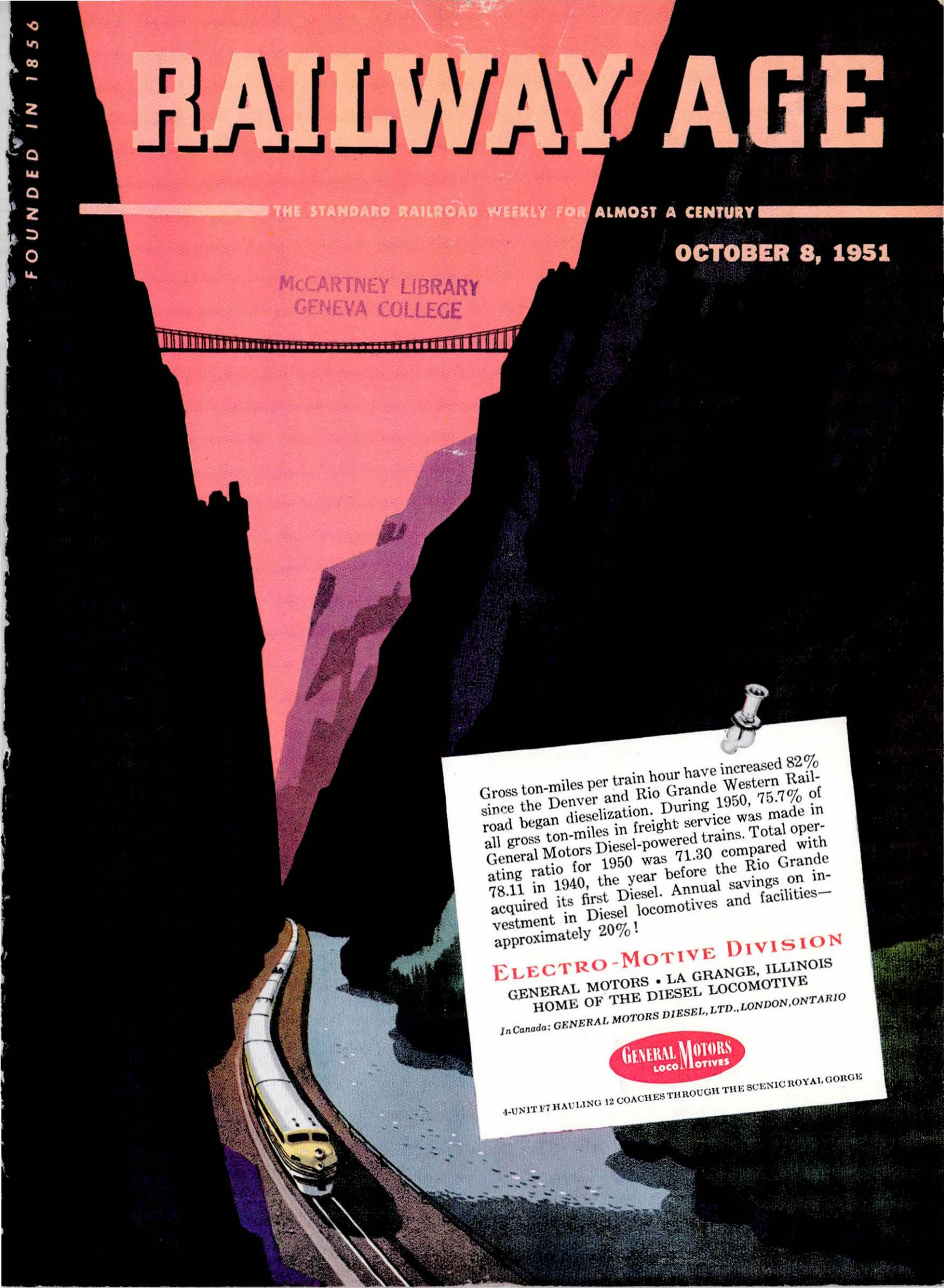


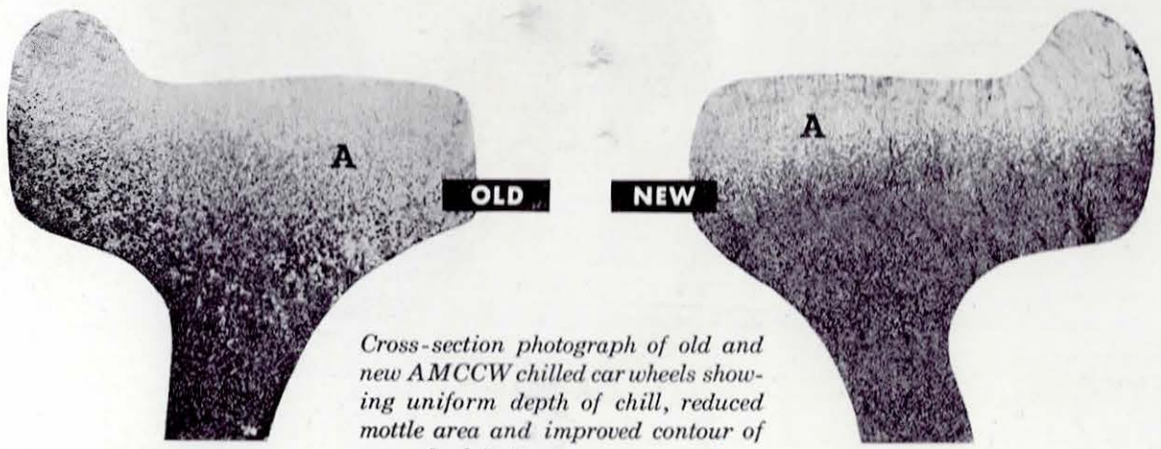
Gross ton-miles per train hour have increased 82% since the Denver and Rio Grande Western Railroad began dieselization. During 1950, 75.7% of all gross ton-miles in freight service was made in General Motors Diesel-powered trains. Total operating ratio for 1950 was 71.30 compared with 78.11 in 1940, the year before the Rio Grande acquired its first Diesel. Annual savings on investment in Diesel locomotives and facilities—approximately 20%!

ELECTRO-MOTIVE DIVISION
GENERAL MOTORS • LA GRANGE, ILLINOIS
HOME OF THE DIESEL LOCOMOTIVE
In Canada: GENERAL MOTORS DIESEL, LTD., LONDON, ONTARIO

GENERAL MOTORS LOCOMOTIVES

4-UNIT F7 HAULING 12 COACHES THROUGH THE SCENIC ROYAL GORGE

Picture of Car Wheel Progress



Cross-section photograph of old and new AMCCW chilled car wheels showing uniform depth of chill, reduced mottle area and improved contour of new wheel design.
Result: 26% improvement in car miles without wheel failure.

Here's why it pays to roll your freight cars on AMCCW wheels

On the left is a typical tread section of the AMCCW chilled car wheel as made prior to 1940. A good wheel in its day, and still rolling thousands of freight cars. Measured by the hard-boiled test of miles without wheel failure, this AMCCW car wheel was good for 95,000,000 car miles, according to 1939 figures. But there was still room for improvement. Note the depth of the chill and open mottle at **"A"** in the old wheel. This means relatively high shrinkage and the records show that low shrinkage wheels give longest service life.

The tread section at the right is visibly improved in chill control and contour. Note the lesser but more uniform depth of chilled iron at **"A"** in the new wheel. This gives maximum hardness on the wearing surface (*longer life*). And see how the softer but more resilient gray iron has been brought closer to the white iron for maximum shock absorption.

Close examination also reveals the change in design approved by the AAR in September 1950 which gives the AMCCW wheel at the right 100% greater rim strength and at the same time greatly improves the strength of the flange (*increased safety*).

When you specify AMCCW chilled car wheels you get this ideal combination of qualities: non-flowing hard metal on the tread, resilient shock-absorbing gray iron in the plate, easy-to-machine hub section, all cast into one integral unit. You get near-perfect uniformity, too, and the advantages of improvements as they are born of research, developed, and approved for production. It all spells millions more car-miles without failures. That's why it pays in safety and economy to insist on AMCCW car wheels for freight car service.

For more complete information about the advantages of AMCCW chilled car wheels, write us for the new booklet, "GENTLEMEN OF THE JURY."

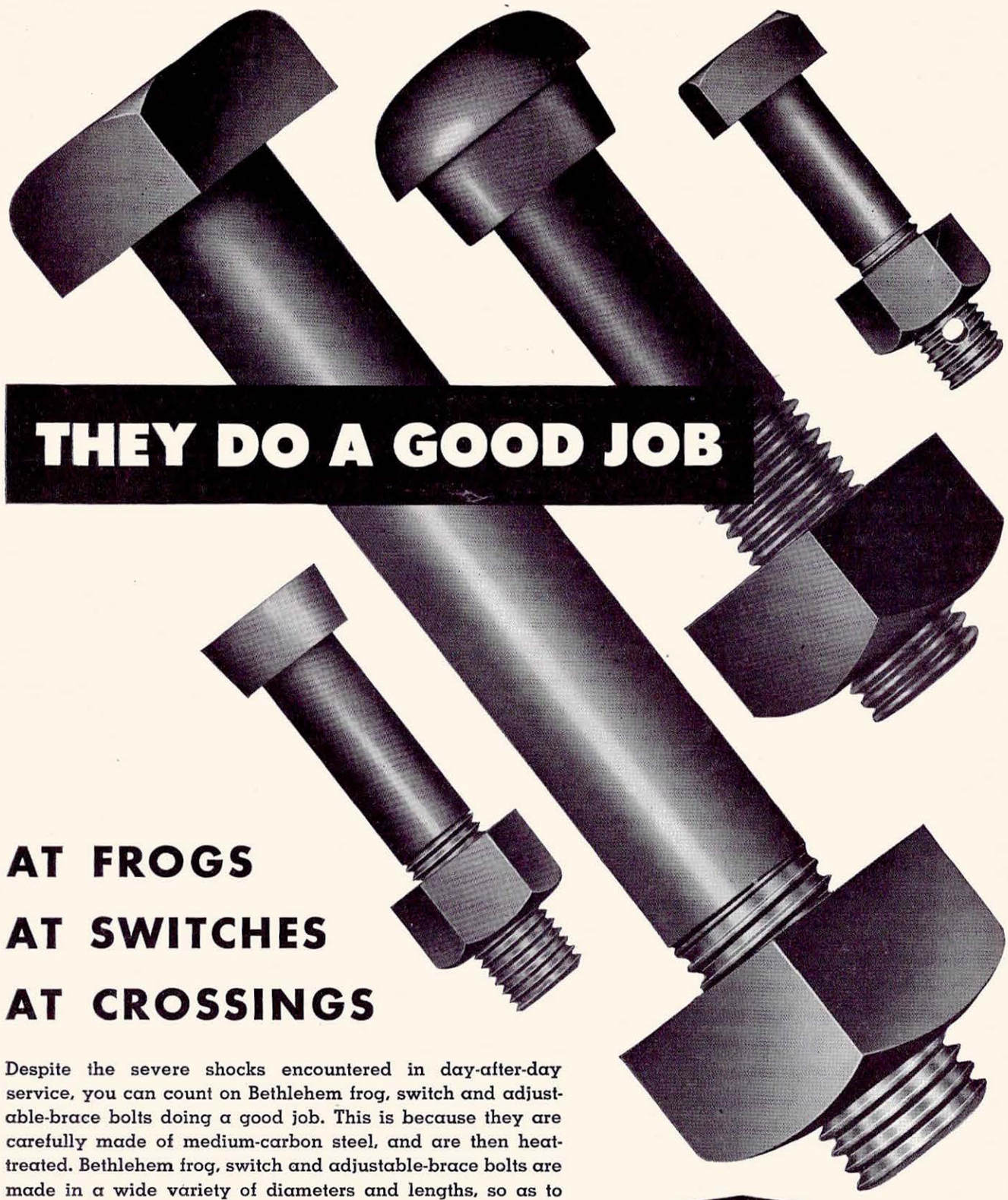
NOW, more brackets—thicker, heavier, more continuous flange support; heavier tread on both rim and flange sides.

Low first cost
Low exchange rates
Reduced inventory
Short haul delivery
Increased ton mileage
High safety standards
Complete AMCCW inspection
Easier shop handling

ASSOCIATION OF MANUFACTURERS OF CHILLED CAR WHEELS

445 North Sacramento Boulevard, Chicago 12, Ill.

American Car & Foundry Co. • Southern Wheel (American Brake Shoe Co.)
Griffin Wheel Co. • Marshall Car Wheel & Foundry Co. • New York Car Wheel Co.
Pullman-Standard Car Mfg. Co.



THEY DO A GOOD JOB

AT FROGS
AT SWITCHES
AT CROSSINGS

Despite the severe shocks encountered in day-after-day service, you can count on Bethlehem frog, switch and adjustable-brace bolts doing a good job. This is because they are carefully made of medium-carbon steel, and are then heat-treated. Bethlehem frog, switch and adjustable-brace bolts are made in a wide variety of diameters and lengths, so as to meet all railroad specifications. Frog bolts with square heads are carried in stock for prompt delivery.

BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. *Export Distributor:* Bethlehem Steel Export Corporation

BETHLEHEM STEEL

Bethlehem supplies every type of Railroad Fastener

It's Easier with HYATTS

The basic design of Hyatt Roller Bearing Journal Boxes makes them easier to maintain. Straight radial construction permits easy, quick removal of journal boxes by hand, without special tools and without disturbing any press fits.

When wheels are dropped, Hyatt boxes can be slipped off, given a quick visual inspection, and immediately reapplied to another wheel-set equipped with Hyatt inner races and water guards.

Spare axles require Hyatt inner races only, instead of complete journal boxes. This permits a substantial reduction in spare parts inventory.

No special tools!

1. REMOVE

2. INSPECT

3. REAPPLY

We have prepared a simple plastic journal box visualizer to illustrate this point. Let us send you one free of charge. Hyatt Bearings Division, General Motors Corporation, Harrison, N. J.

HYATT ROLLER BEARING JOURNAL BOXES

Vol. 131, No. 15 October 8, 1951

RAILWAY AGE

With which are incorporated the Railway Review, the Railroad Gazette, and the Railway-Age Gazette. Name Registered in U. S. Patent Office and Trade Mark Office in Canada.

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Railway Age Railway Mechanical & Electrical Engineer Railway Engineering & Maintenance
Railway Signaling & Communications Car Builders' Cyclopedia Locomotive Cyclopedia
Railway Engineering & Maintenance Cyclopedia American Builder
Marine Engineering & Shipping Review Marine Catalog & Buyers' Directory
Books covering transportation and building

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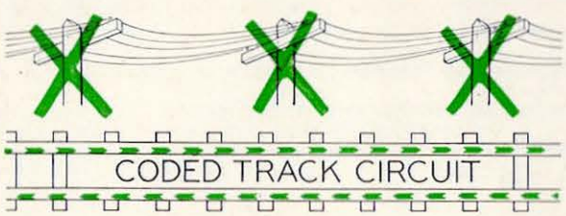
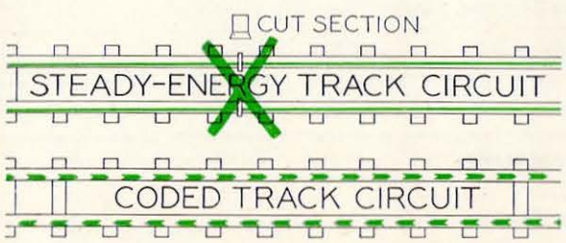
4 WAYS YOU CAN SAVE... With "UNION" CODED TRACK CIRCUIT CONTROL

1



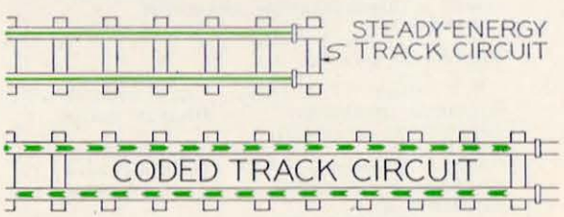
"Union" Coded Track Circuit Control utilizes the track rails for transmittal of signal controls . . . makes it possible for you to reduce, or entirely eliminate, the cost of installing and maintaining line wire.

2



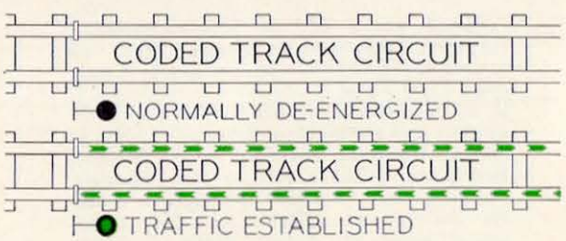
since Coded Track Circuits can be much longer than those using steady-energy under comparable conditions, there are fewer cut sections to install and maintain.

3



Important battery economies are possible, too, since the much longer Coded Track Circuits usually can be energized with less battery consumption than required for the shorter steady-energy circuits.

4



Normally de-energized Coded Track Circuit Control can be used in light and medium-traffic C.T.C. territories to reduce power requirements substantially.

Remember, too, that while "Union" Coded Track Circuit Control affords these important economies, it also insures greater reliability and safety. Our nearest district office will be glad to give you full details.

UNION SWITCH & SIGNAL

DIVISION OF WESTINGHOUSE AIR BRAKE CO.

SWISSVALE, PENNSYLVANIA

NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

WEEK AT A GLANCE

CURRENT RAILWAY STATISTICS

Operating revenues, seven months
1951 ..... $ 5,852,688,158
1950 4,995,868,031

Operating expenses, seven months
1951 ..... $ 4,659,130,003
1950 3,933,258,106

Taxes, seven months
1951 ..... $ 643,599,245
1950 527,361,340

Net railway operating income, seven months
1951 ..... $ 430,439,242
1950 431,815,948

Net income, estimated, seven months
1951 ..... $ 272,000,000
1950 273,000,000

Average price railroad stocks
October 2, 1951 ..... 56.51
October 3, 1950 ..... 48.75

Car loadings, revenue freight
38 weeks, 1951 29,477,675
38 weeks, 1950 27,618,673

Average daily freight car surplus
Week ended September 29, 1951.. 2,595
Week ended September 30, 1950.. 2,774

Average daily freight car shortages
September 29, 1951 16,753
September 30, 1950 34,072

Freight cars delivered
August 1951 7,183
August 1950 5,203

Freight cars on order
September 1, 1951 139,104
September 1, 1950 86,156

Freight cars held for repairs
September 1, 1951 96,020
September 1, 1950 113,654

Average number railroad employees
Mid-August 1951 1,295,941
Mid-August 1950 1,270,215

Net Ton-Miles per Serviceable Car per Day
July 1951 (preliminary) 955
July 1950 969

In This Issue . . .

GOING ON IN THE INDUSTRY: Seven months' purchases top $2 billion (page 48).—Bessemer & Lake Erie builds automatic sanding plant (page 38).—*And in the news*: Great Lakes Shippers Board outlines its ideas on a national transportation policy.—Coast Line buys two "Unicel" box cars for test purposes.—Whittemore warns New England Shippers Board that compulsory maintenance of unprofitable passenger services threatens continuation of rail freight transportation.—Railroads will ask I.C.C. to reconsider its Ex Parte 175 decision and to authorize the full 15 per cent increase in freight rates originally requested.

"CORNFIELD LAYOUTS": Beginning on page 41, N. L. Walsh, of the General Electric Company, outlines the "cornfield" method of planning for adaptation of existing railroad facilities to the needs of diesel-electric locomotive maintenance.

FIRST AID FOR SPAIN: With Spain assuming an increasingly important part in the international picture, and with the Export-Import Bank giving a credit of $7.5 million for rehabilitation of Spanish railways, it is both interesting and timely to see why that money is needed and how it will be spent. The situation is reviewed, with illustrations and a map, in the feature article which starts on page 44.

In Washington . . .

FROM THE NATION'S CAPITAL: A.A.R. to establish special Loss & Damage Prevention Section.—Eugene C. Thompson new secretary of National Mediation Board.—Electrical Sections of A.A.R.'s Engineering and Mechanical Divisions to be consolidated.—Wilson predicts winter shortage of open-top cars.—Knudson heads new iron and steel scrap committee.—Truman still strong for St. Lawrence waterway.

WHY SHOULDN'T THEY BE DOING WELL? In announcing its "administrative separation" of air mail payments and outright subsidies, reported in the news columns, the Civil Aeronautics Board took occasion to throw a few bouquets at domestic civil air lines for the "growth" they have shown in recent years. Sounds good—until you realize that admitted subsidies alone have totaled some $270,000,000 in the past years! And it's pretty hard to believe there isn't still a strong element of subsidy in mail payments when they amount to $7 per ton mile. With such backing, why

WEEK AT A GLANCE

ELMER E. GORDON, a passenger traffic manager who tallies his department's efforts with black ink. For 1950, the Chicago & Eastern Illinois reported, without back mail pay, an I.C.C. passenger operating ratio of 95.7. The other day Mr. Gordon informed us that 1951 gross passenger revenues are topping 1950 figures by 27 per cent! Heavy patronage has warranted his adding an entirely new train—an Evansville-Chicago section of the "Hummingbird," to handle cars formerly carried in the increasingly popular Chicago-Atlanta "Georgian" of the C. & E.I., L. & N. and N.C. & St. L.

shouldn't the air lines have done well? Most any plant can be made to grow in a hothouse!

. . . And Elsewhere

AIRLINE DOINGS: Three classes of passengers will be handled in the same plane beginning October 16 when United plans to inaugurate "Mainliner Stratocruiser" service on its Los Angeles-San Francisco-Seattle-Tacoma route. The double-decked planes accommodate on the top deck 55 passengers, who will pay (exclusive of taxes) the standard fare of $21.05 each between Los Angeles and San Francisco or $42.50 between San Francisco and Seattle-Tacoma. On the lower deck, "tourist" passengers, occupying the lounge (seating 14) will pay $17 and $37, respectively. The deluxe "stateroom" on the upper deck will accommodate a limited number of additional passengers, who must pay an extra charge of $5 or $9 each over the standard fares. Meal service is limited to "standard" and "stateroom" passengers. As United also offers air coach service between the west coast cities, it expects to become the first air line ever to offer four classes of service on a single route. The company has also announced continuance of reduced air freight rates on specific commodities moving eastward from California points, Denver and Chicago. These rates—inaugurated in August 1948, to balance movement of cargo traffic—will now continue in effect until August 1952.

CAUSE OF HIGHWAY TROUBLES: That the present unsound conditions of the nation's highways is due in part to the federal attitude during World War II that the highway system was expendable, was charged by F. N. Backer, chief highway engineer for the state of Illinois, before the annual meeting of the National Association of Motor Bus Operators in Chicago on September 12. The states had practically to agree to suspend size and weight limitations in order to boost highway capacity at a time when construction work was virtually halted. The country has not recovered from these setbacks, Mr. Backer stated, in commenting on present efforts of Washington officials to get the states again to relax size and weight limitations.

SHIPPER RAKES LABOR RULES: Operating employees of the railroads came in for a blunt, if friendly, tip from one of the country's top industrial traffic managers at the recent Seattle convention of the A.T.C. This railroad customer compared wages and hours of over-the-road truck operators with those of train crews on fast freights and found that railroad employees simply get too much for too little. "When one compares, from a layman's point of view, the labor required to pilot a 20-ton, 4- to 6-axle, 16- to 20-wheel freight truck over the highways for eight hours, it makes the labor and strain from operating a modern passenger diesel or modern steam engine five hours fade into insignificance."

PRESIDENTS TO PRESIDENTS: Northern Pacific President Marfarlane journeyed to his old home town of Seattle to give his address to the Associated Traffic Clubs of America on September 25, in the company of Presidents Budd of the Great Northern and Murphy of the Burlington. Before he got into the body of his talk, Col. Macfarlane remarked that, under the rules of the "American Federation of Railroad Presidents," it was not obligatory for railroad presidents to listen to other president's talks, and invited Messrs. Budd and Murphy to leave. They stayed!

FREEDOM WHEELS

Users' experience certifies Freedom Wheels as the most successful means of suppressing or eliminating thermal cracking under the unusually severe braking conditions in today's high speed operations.

Over 500,000 in service. Ask a user about Freedom Wheels' high-speed, severe-braking performance.

STANDARD STEEL WORKS DIVISION

BALDWIN-LIMA-HAMILTON CORPORATION

Burham, Penna.

BALDWIN-LIMA-HAMILTON

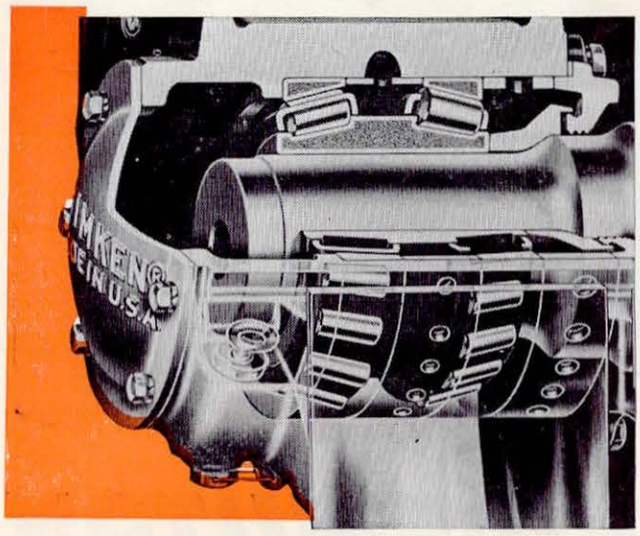
Operating tests show TIMKEN® bearings go to wheel-turning

Switch from oil to grease lubrication economies for railroads using TIMKEN®

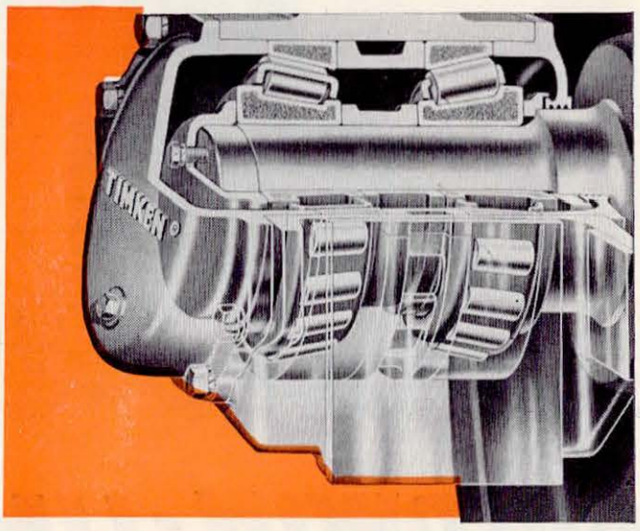
EXTENSIVE tests on passenger cars and diesels in regular service prove it! Grease-lubricated Timken® bearings on passenger cars and diesel locomotives can safely go a full wheel-turning period without lubricant being added. In fact, one railroad ran grease-lubricated Timken bearings over 200,000 miles without adding any lubricant!

Railroad tests show that Timken bearings are the *only* railroad journal bearings using an AAR-approved grease which can consistently go a full wheel-turning period without adding lubricant. And Timken bearings can be converted from oil lubrication to grease without modifying the bearings or buying extra journal parts.

Impressed by the tremendous savings in lubri-



Typical Timken roller bearing application for passenger cars.



Typical Timken roller bearing application for diesel locomotives.

grease-lubricated from wheel-turning without attention!

opens way to great new operating bearings on passenger cars and diesels

cation costs which this makes possible, three great railroads are already switching from oil to grease lubrication on their Timken bearing equipped passenger cars. These railroads are completely eliminating the man-hours previously needed for lubrication between wheel-turnings. And in addition they're saving the cost of the lubricant.

More than a dozen other railroads are now testing wheel-turning to wheel-turning lubrication of their Timken bearings. We would be glad to help you investigate the cost-saving advantages of grease-lubrication of Timken bearings on *your* railroad, too. Write The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ontario. Cable address: "TIMROSCO".

TIMKEN

TRADE-MARK REG. U. S. PAT. OFF.

TAPERED ROLLER BEARINGS

NOT JUST A BALL NOT JUST A ROLLER THE TIMKEN TAPERED ROLLER BEARING TAKES RADIAL AND THRUST LOADS OR ANY COMBINATION

LONG exceptionally

Exide-Ironclad
DIESEL-CRANKING BATTERIES

The exclusive features that give Exide-Ironclad Batteries an exceptionally long life, provide the economies of low depreciation and infrequent replacements. They also provide these other qualities so essential in a Diesel-cranking battery:

QUICK BREAKAWAY and fast acceleration of engine to firing speed.

HIGH POWER RESERVE at all times for positive operation of control equipment.

LOW COSTS of operation, upkeep, repair.

EASE OF MAINTENANCE—also easy to change and keep charged.

RUGGED CONSTRUCTION for hard, continuous use.

INHERENT SAFETY — freedom from hazards of fire or disruptive breakage.

INTERCHANGEABLE SIZES—reducing number of spare batteries required.

These and other qualities combine to make Exide-Ironclad the best battery buy . . . at any price.

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia 2
Exide Batteries of Canada, Limited, Toronto

"Exide-Ironclad" *Reg. Trade-mark U. S. Pat. Off.*

1888 . . . DEPENDABLE BATTERIES FOR 63 YEARS . . . 1951

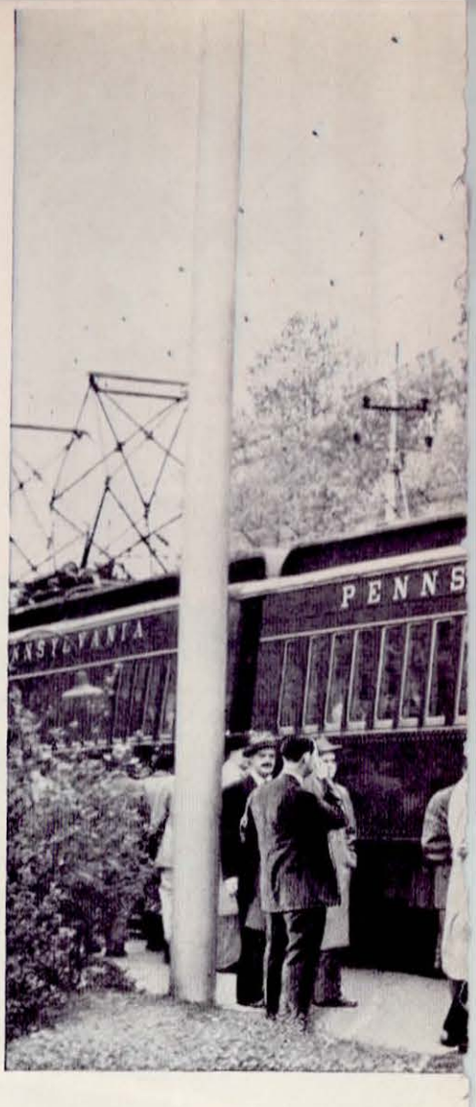
◀ Type MV-17-D Exide-Ironclad Battery—284 ampere hours—for cranking switching locomotives of 600 hp. and larger.

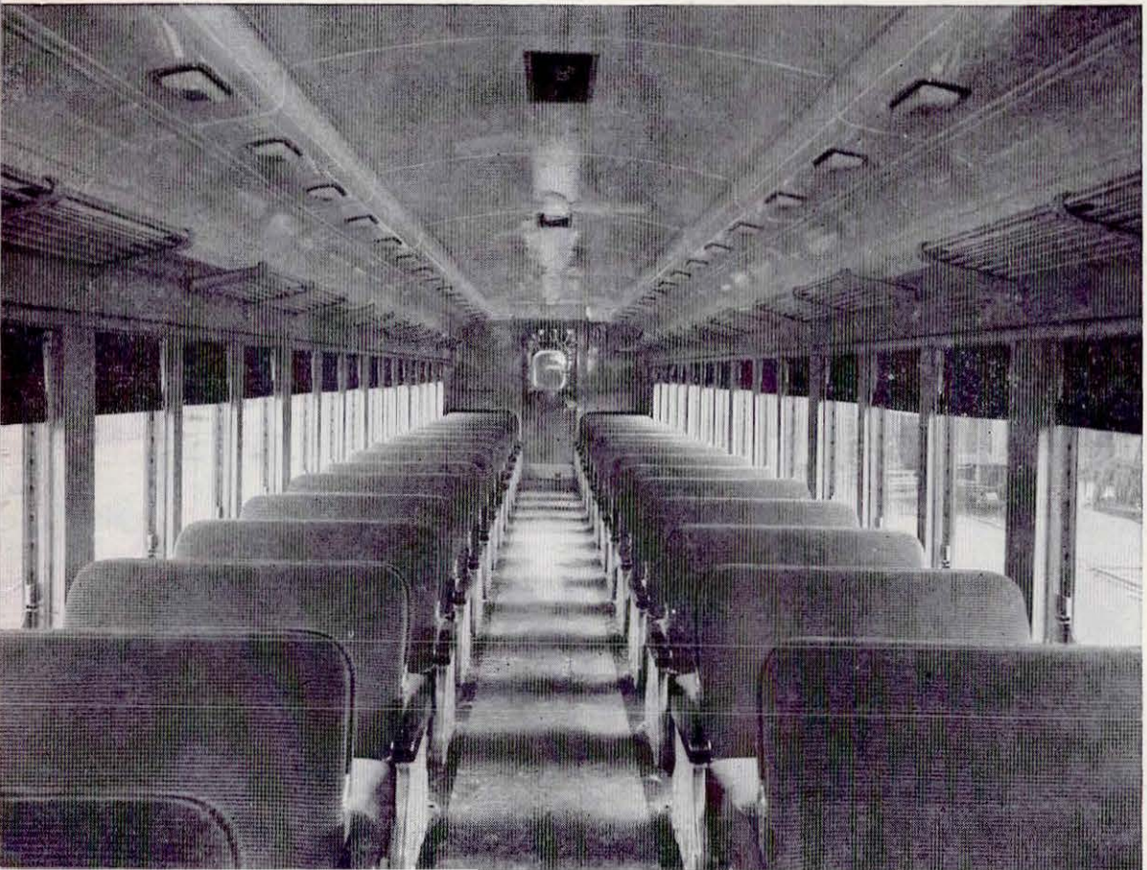
Type MV-25-D Exide-Ironclad Battery—426 ampere hours—for cranking road locomotives of the larger sizes. ▶

WHEN IT'S AN EXIDE-IRONCLAD YOUR DIESELS *START*

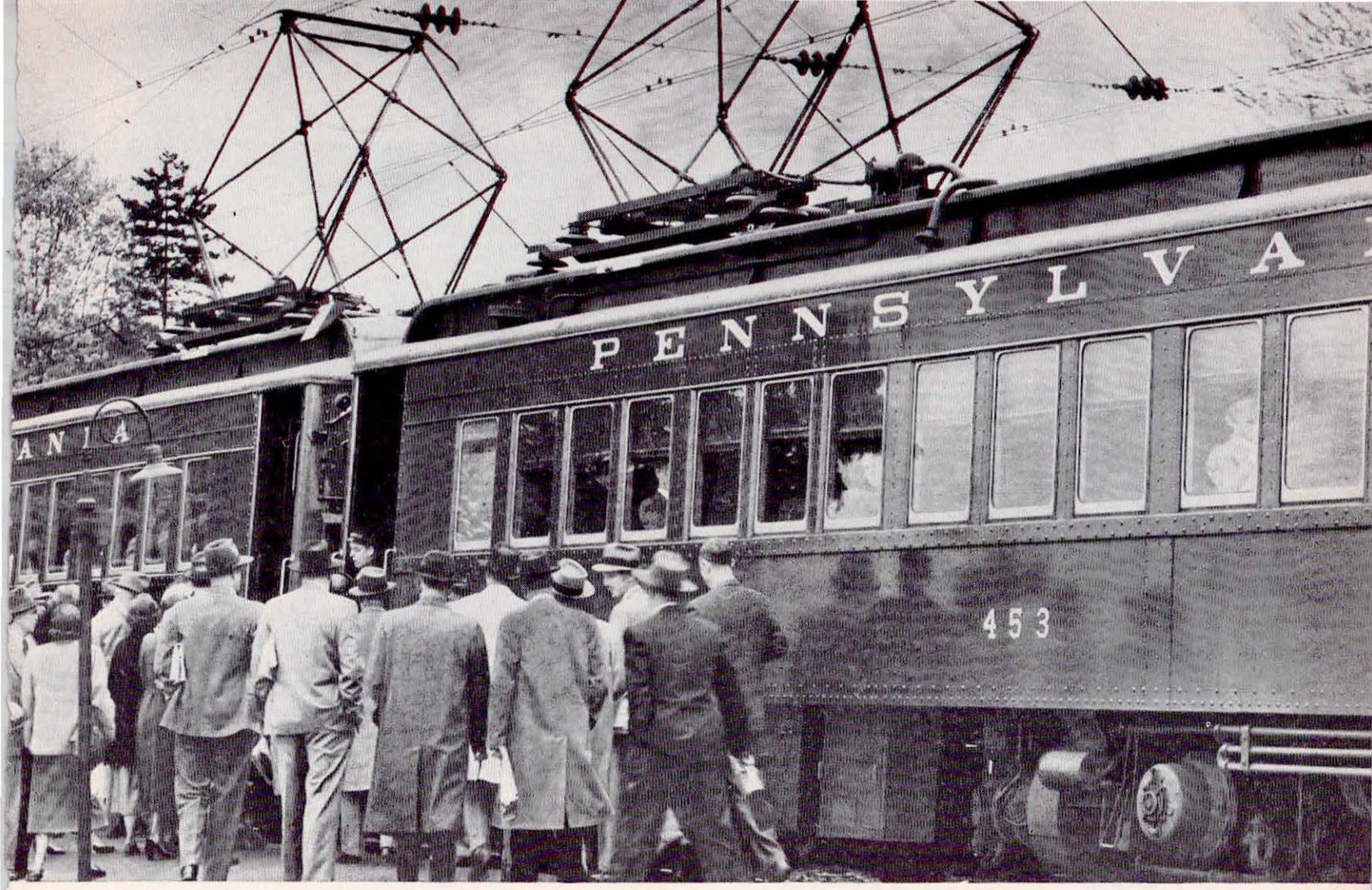
long LIFE...

PENNSYLVANIA CONTINUES PROGRESS with NEWLY DESIGNED 4-MOTOR





Pleasant interior color scheme combines red or blue upholstery with sides of pastel gray with red trim and ceilings in eggshell white. Asphalt tile is used for floor covering. Roofs, sides, and floors are insulated for greater comfort in both summer and winter.



By adding the 50 newly designed cars, the Pennsylvania has increased its over-all daily commuting capacity by 14,400 seats.

COMMUTER CARS

50 completely rebuilt cars used for service in the electrified Eastern commuter zone include modern G-E equipment that incorporates latest advances in design of a-c motor and control apparatus. Result is more comfortable transportation for growing commuter traffic.

RAILROAD ELECTRIFICATION SYSTEMS

With large numbers of city dwellers moving to the more spacious suburbs in recent years, railroads have had an increasing problem to handle traffic that is crowding the commuter passenger-mile record of 1926. Among the roads that are providing for this increase—and for even more business in the future—is the Pennsylvania, which has recently completed the rebuilding of 50 commuter cars.

Staunch believer in railroad electrification where it is justified by the volume of traffic, the Pennsylvania management is convinced that MU cars are most efficient for heavy commuter service. Further experience and various studies show that all-motor-car trains are preferable to motor-trailer combinations, and the ideal is for *each axle to be powered.*

The Pennsylvania's newly designed 4-motor cars operate on 11,000-volt, 25-cycle, single-phase a-c. They have a top speed of 70 mph and meet the tough requirements of modern commuter service—fast schedules and frequent stops. By selecting G-E motors and control, the Pennsylvania is capitalizing on the latest advances in design of a-c apparatus. Ask your G-E representative for the full story of the benefits of electrification for commuter service through the use of modern G-E distribution and traction equipment, or write to *General Electric Company, Schenectady 5, N. Y.*

GENERAL ELECTRIC

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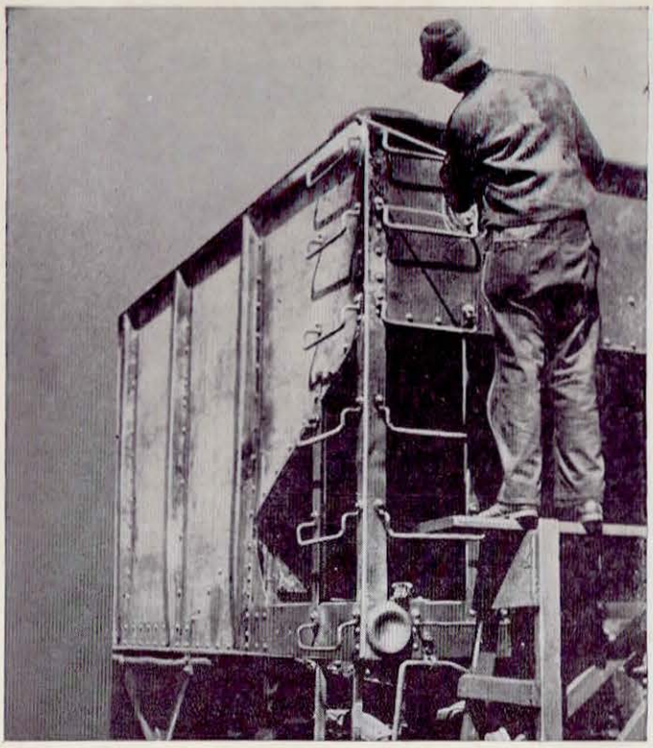
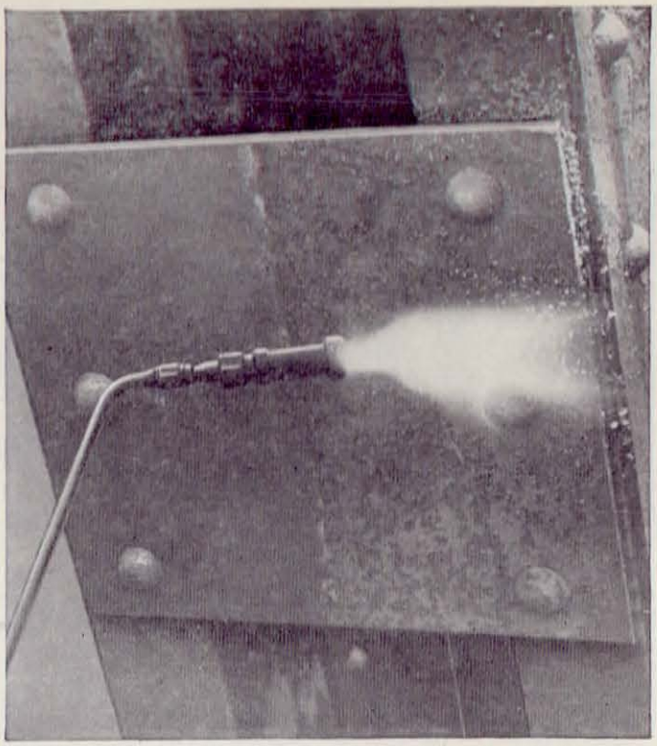


END POST . . . Here, a style 738 Round Bent Tip is used to flame clean the end post of a freight car. This multi-flame tip is ideal for removing scale from corners and around rivets.



BATTEN PLATE . . . on a railroad bridge being flame cleaned with Airco torch. Notice how smooth and clean one half of the plate is . . . how old paint and rust flakes have been completely removed.

flame cleaning

CARS . . . BRIDGES . . . STEEL STRUCTURES CUTS PAINTING PREPARATION COSTS AS MUCH AS 50%

For speed and effectiveness, no other method of preparing steel surfaces for painting comes close to the flame cleaning process. Cost studies made by several leading railroads show that, compared to laborious hand scraping and chipping, cleaning costs are cut by as much as *one-half!*

This Airco process is also used to condition new steel before applying prime coats. Mill scale is loosened and corrosion-starting dirt and moisture eliminated. Surfaces thus prepared reduce costs of future maintenance.

Airco's wide variety of special multi-flame tips make it possible to clean surfaces of practically every contour and size. Learn how you can save with fast, economical oxy-acetylene flame cleaning — get in touch with your local Airco office today.

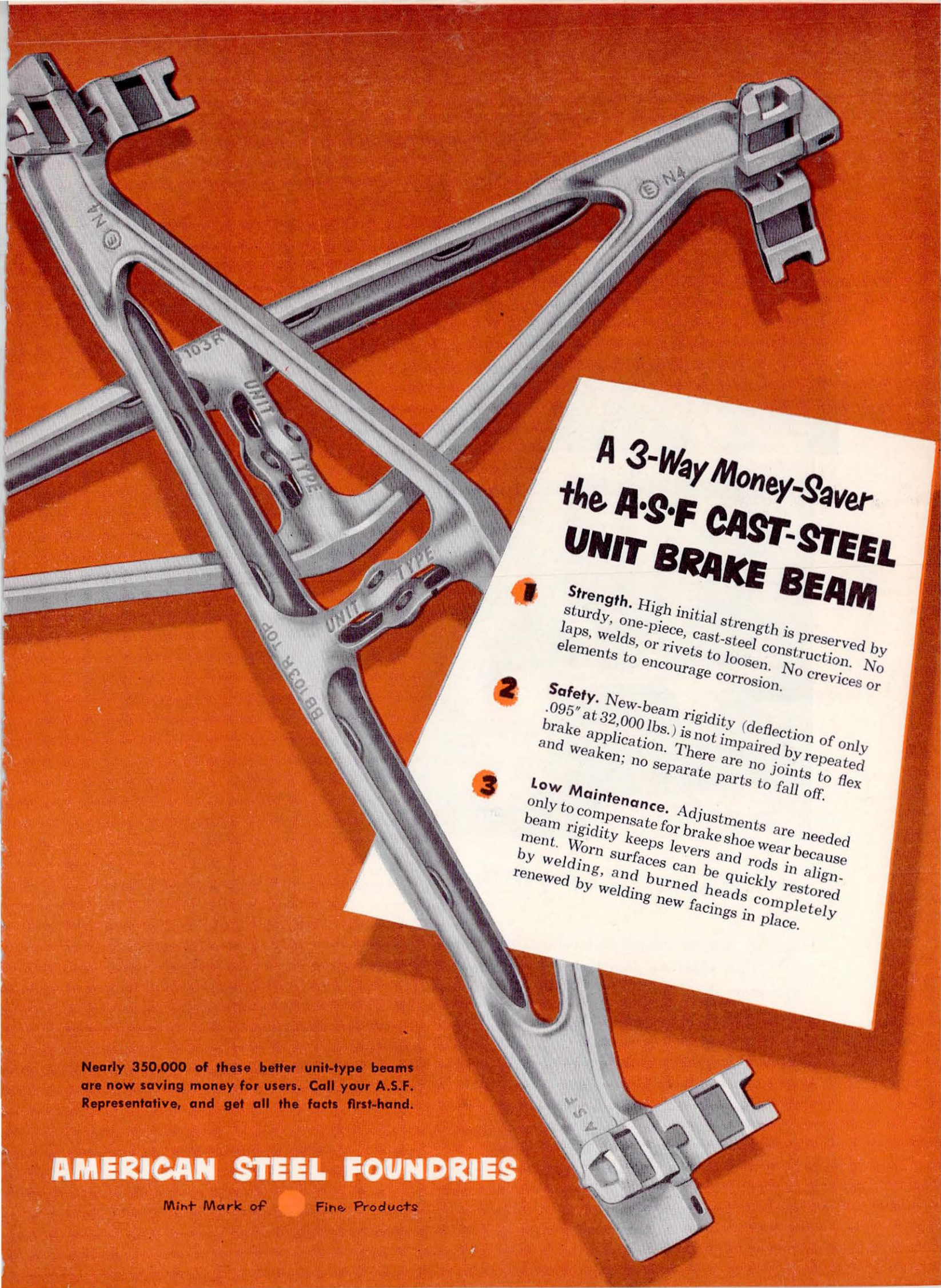
BEAM FLANGE of a pit-installed track scale is Airco flame-cleaned prior to painting. Using an Airco Style No. 120 Tip, this oxyacetylene process is equally adaptable for cleaning water towers . . . signalling equipment . . . in fact, any type of steel railway structure.

Costs come down under the Airco plan

AIRCO

AIR REDUCTION

AIR REDUCTION SALES COMPANY • AIR REDUCTION MAGNOLIA COMPANY
AIR REDUCTION PACIFIC COMPANY
REPRESENTED INTERNATIONALLY BY AIRCO COMPANY INTERNATIONAL
Divisions of Air Reduction Company, Incorporated
Offices in Principal Cities



A 3-Way Money-Saver the A·S·F CAST-STEEL UNIT BRAKE BEAM

1. **Strength.** High initial strength is preserved by sturdy, one-piece, cast-steel construction. No laps, welds, or rivets to loosen. No crevices or elements to encourage corrosion.

2. **Safety.** New-beam rigidity (deflection of only .095″ at 32,000 lbs.) is not impaired by repeated brake application. There are no joints to flex and weaken; no separate parts to fall off.

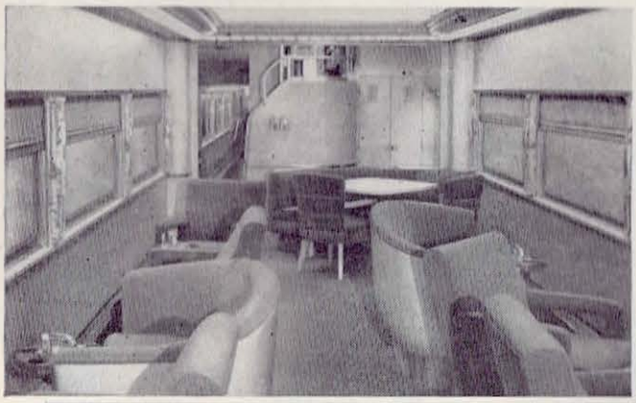
3. **Low Maintenance.** Adjustments are needed only to compensate for brake shoe wear because beam rigidity keeps levers and rods in alignment. Worn surfaces can be quickly restored by welding, and burned heads completely renewed by welding new facings in place.

Nearly 350,000 of these better unit-type beams are now saving money for users. Call your A.S.F. Representative, and get all the facts first-hand.

AMERICAN STEEL FOUNDRIES

Mint Mark of Fine Products

Goodall Fabrics decorate the luxurious cars of the New Santa Fe Super Chief



Goodall's luxurious upholstery, smart, harmonious draperies, and window shade facings are featured in the inviting new Super Chief Pleasure Dome car shown at left.

The dining car is dramatized by the warmth and beauty of Goodall upholstery and draperies.

Cars are by Pullman-Standard

Where durability and luxury are the keynote – Goodall Fabrics are preferred

NOTE that the magnificent cars of the famed new Super Chief are decorated with Goodall Fabrics—upholstery, draperies, even the window shade facings! For only Goodall Fabrics are *Blended-for-Performance* to give greater beauty, longer wear, and easier maintenance. Other leading roads throughout the country are enjoying the same wonderful benefits these advantages bring—rider-good-will and long-range economy.

Goodall Fabrics
Subsidiary of Goodall Sanford, Inc.
THE FINEST NAME IN FABRICS

© 1951, Goodall Fabrics, Inc. (Subsidiary, Goodall-Sanford, Inc.)

GOODALL FABRICS, INC. • NEW YORK • BOSTON • CHICAGO • DETROIT • SAN FRANCISCO • LOS ANGELES

Fast worker—reliable, too! This "Caterpillar" Diesel No. 212 Motor Grader is working on the Alton & Southern R. R. right of way in the Davis Yards, East St. Louis. A time-saving tool on off-track maintenance, it stands up under tough going. As a military tool, it's essential for airport construction and maintenance, road construction, the establishment of bases and other earthmoving jobs.

HOW TO GET MORE WORK FROM YOUR "CAT" MOTOR GRADER!

Our country's defense efforts have put a heavy burden on the railroads. The pressure's on—every short cut helps! Among other things, this spotlights the value of mechanized off-track maintenance, where "Caterpillar" Motor Graders have proved themselves vital tools.

The speed, versatility and big work capacity that have made these machines essential along the track have also made them essential to our armed forces. As military orders get first call, you may not be able to obtain prompt delivery of new machines. So it will pay you to plan now to get more work from your present equipment.

"Cat" Motor Graders are ruggedly built for long life. But good care on your part can lengthen that life span by thousands of extra service hours. Here's how:

1. **Follow the recommended *operating* care in your Operator's Instruction Book. Read and reread it.**
2. **Observe the *maintenance* suggestions in the Operator's Instruction Book. They're down-to-earth—experience has proved them practical and effective.**
3. **Anticipate your future replacement parts needs by seeing your "Caterpillar" dealer about them now. Don't wait until wear gets beyond repair—many a part can be rebuilt *if* serviced in time.**

You're in good hands when you work closely with your "Caterpillar" dealer. He is anxious to help solve your problems. His staff and service facilities are ready to help you lick them.

CATERPILLAR TRACTOR CO. • PEORIA, ILLINOIS

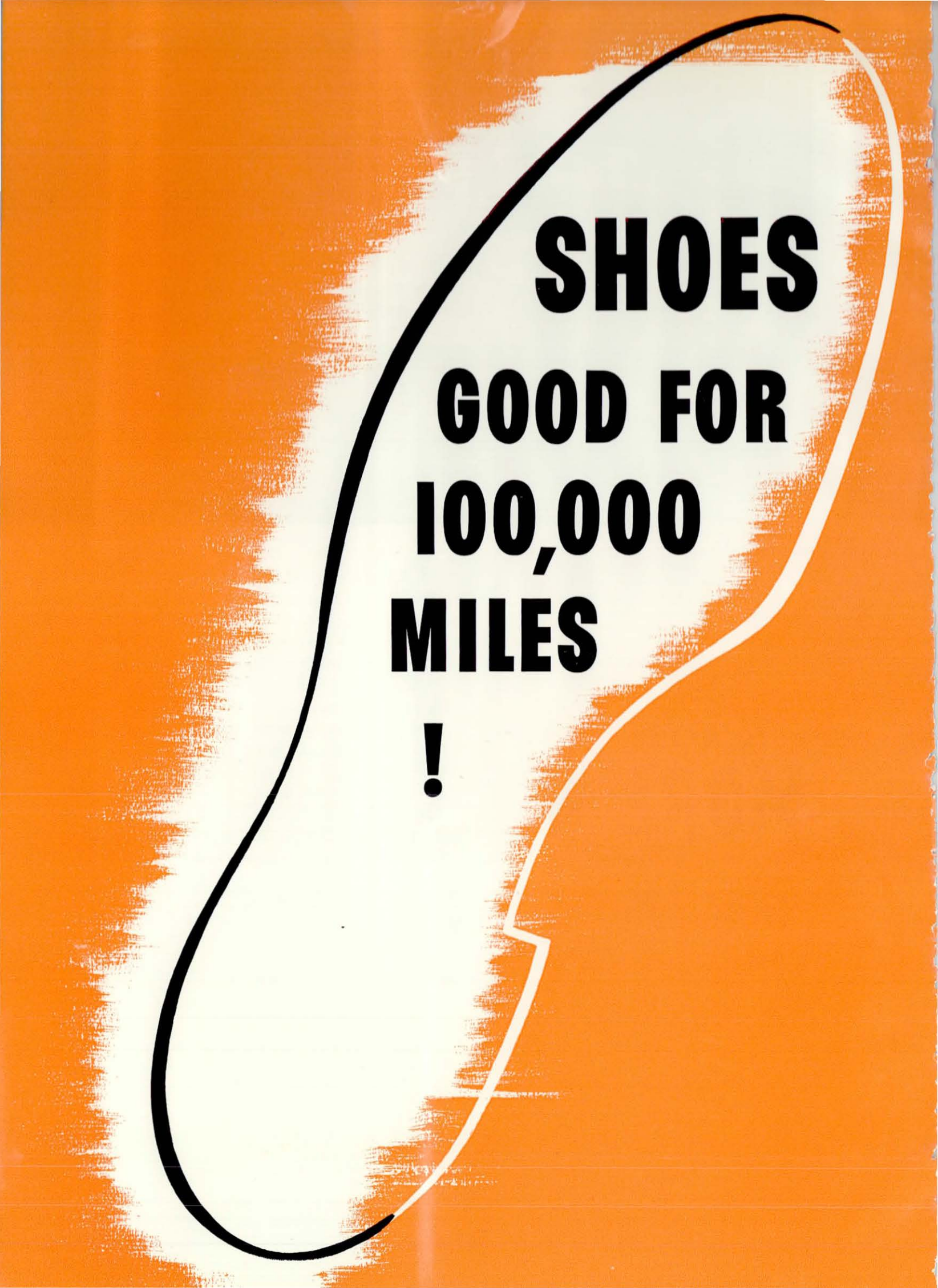
You're the Doctor

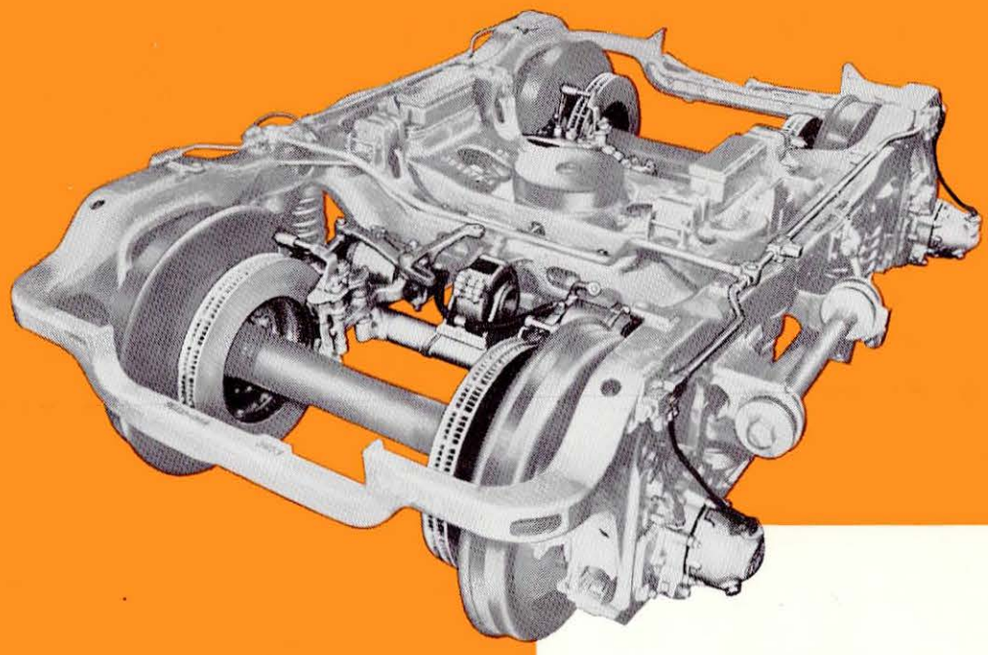
Preventive maintenance is good medicine for long life. Your Operator's Instruction Book is invaluable in the fight to conserve machine life. Follow the operation, lubrication and maintenance recommendations. When wear is evidenced in cutting edges, gears, tires or engine, see your "Caterpillar" dealer. He can help you prolong the life of your motor grader. Your motor grader is essential—don't abuse it.

CATERPILLAR

REG. U. S. PAT. OFF.

DIESEL ENGINES • TRACTORS • MOTOR GRADERS • EARTHMOVING EQUIPMENT


SHOES
GOOD FOR
100,000
MILES
!



Recently we received a report from a maintenance superintendent whose railroad uses Budd railway disc brakes on cars in commuter service.

It's his first experience with them, and he was jubilant that after 75,000 miles the shoes showed hardly any wear at all.

Time after time we have been informed of cases where Budd disc brake shoes have regularly provided 100,000 miles in the kind of service which requires changing clasp brake shoes every 6,000 miles.

One of the reasons for this performance lies in the ability of the brake to shrug off heat . . . heat energy far beyond the thermal capacity of clasp brakes.

The asbestos composition of the shoe forces the heat into the disc, which presents many times the heat absorbing area of a clasp brake. And the disc takes care of getting rid of it under the most punishing conditions of high-speed schedules and long dragging mountain grades with no cycling.

Extended brake shoe life is one way Budd railway disc brakes are helping railroads to save a thousand dollars or more a year per car.

The Budd Company, Philadelphia 32.

Budd

Edgewater

multiple wear

Passenger Car Wheels

Rolled Steel

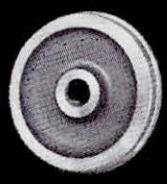
HEAT-TREATED OR UNTREATED

Edgewater Steel Company

P.O BOX 478 • PITTSBURGH 30, PA.

makers of

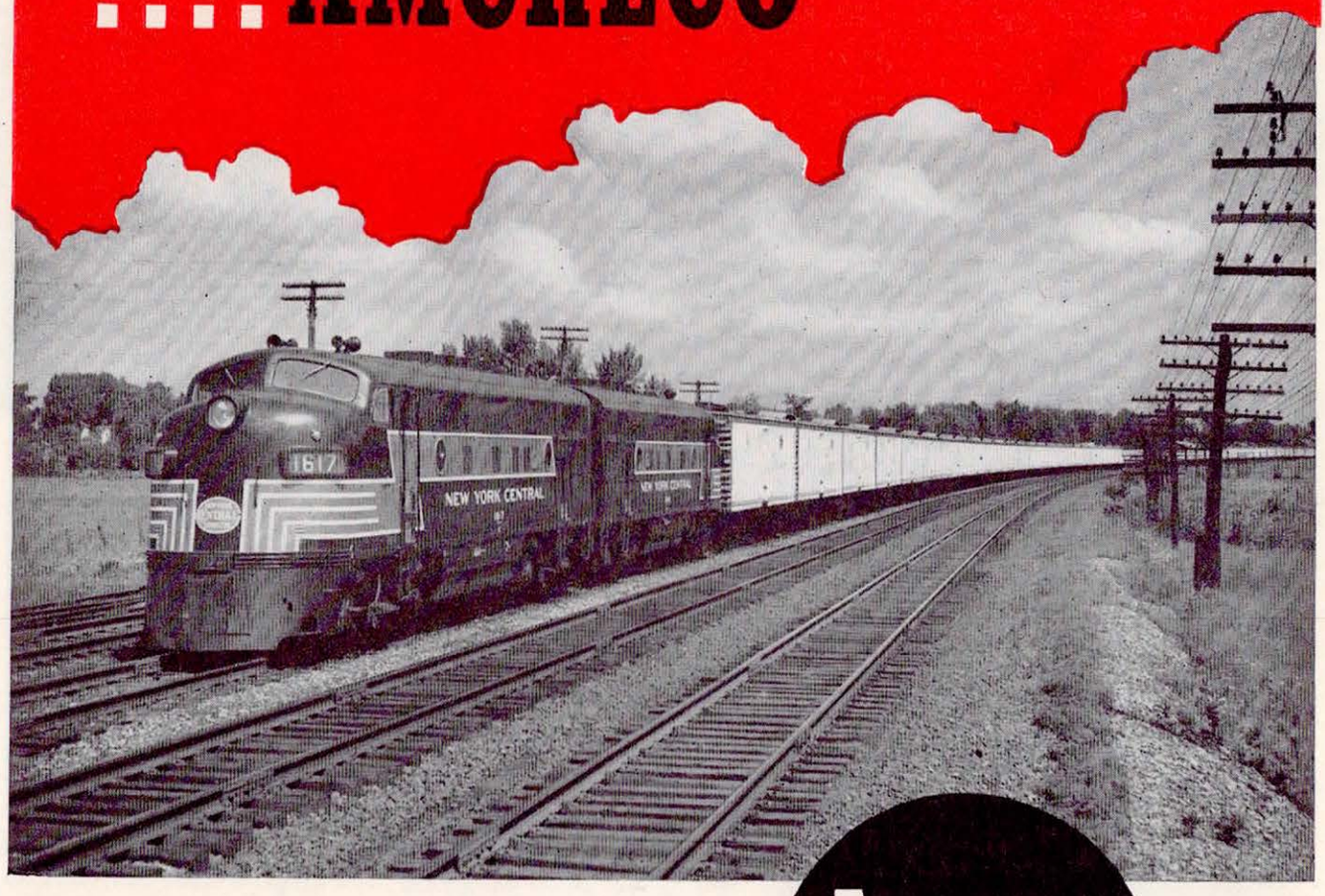
Freight Car



Passenger Car

and Diesel Locomotive Rolled Steel Wheels

Reduce Maintenance Costs with ....AMCRECO



Let Amcreco Creosoted Products help you cut maintenance costs . . . they can do it.

This is no idle claim! The records of several of the nation's leading railways prove that cross ties, bridge ties, framed bridge timbers, piles, poles and cross arms treated with the Lowry Process of pressure creosoting *last longer* . . . in fact, they even exceed normal life expectancy. This process protects timber so that maintenance is cut to the minimum. Year after year you realize the resultant profits.

Amcreco
Lowry Process
Creosoted Products

Have an Amcreco Representative give you details. There is no obligation.

Pressure treated for strength that lasts

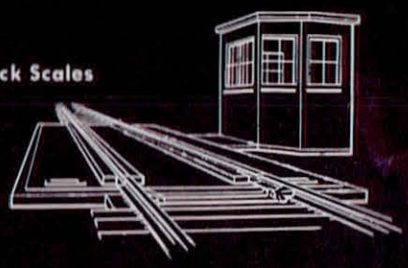
AMERICAN CREOSOTING COMPANY
INCORPORATED

COLONIAL CREOSOTING COMPANY INCORPORATED

AMCRECO LOWRY PROCESS CREOSOTED WOOD

GEORGIA CREOSOTING COMPANY INCORPORATED

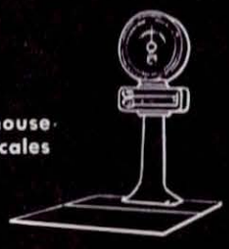
LOUISVILLE, KENTUCKY



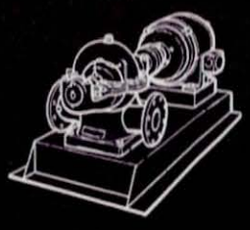
Track Scales

Turbine Pumps

Sanding Stations



Warehouse Scales



Centrifugal Pumps

Sign of Lower Cost Railroading...

In the Fairbanks-Morse line there are almost unlimited opportunities to cut costs in every phase of railroad operation and maintenance.

Rail cars . . . scales . . . sanding stations . . . pumps . . . motors . . . off-track lighting and power equipment . . . a range of sizes and types, each with a background of proved long-time, low-cost performance for railroads everywhere—that's the Fairbanks-Morse line.

Every Fairbanks-Morse branch office is staffed with railroad equipment experts. Call on them, or write Fairbanks, Morse & Co., Chicago 5, Ill.

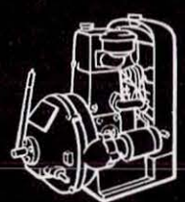
FAIRBANKS-MORSE,

a name worth remembering

RAILROAD EQUIPMENT • RAIL CARS • PUMPS • SCALES • ELECTRICAL MACHINERY • DIESEL AND DUAL FUEL ENGINES
DIESEL LOCOMOTIVES • MAGNETOS

Portable Dial Scales

Rail Cars



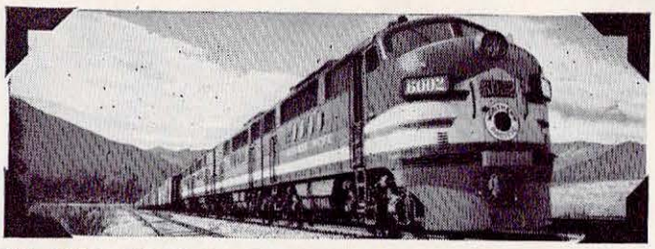
Generating Sets

STANDARD ENGINEER'S REPORT

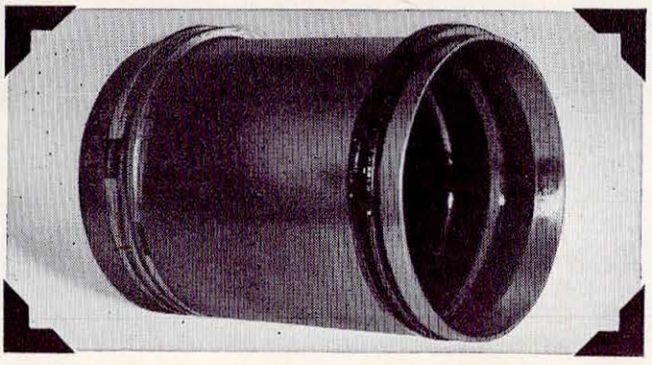
DATA

LUBRICANT	RPM Delo Oil R.R.
UNIT	Locomotive Diesel G.M. 567
SERVICE	Freight haul over mountains
PERIOD	4 years
LOCATION	Auburn, Wash. — Livingston, Mont.
FIRM	Northern Pacific Railway

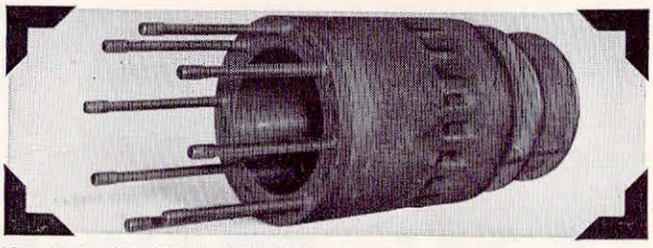
Engine parts still in use after 4 years freight service!



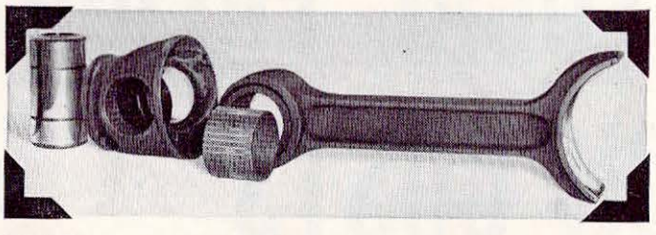
RPM DELO OIL R.R. IN THIS LOCOMOTIVE'S ENGINES during four years of mountain freight service, held wear down so low that after each progressive-maintenance inspection the cylinder-assembly parts were put back to work.

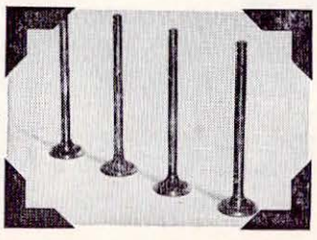


IN SERVICE 490,013 MILES, this piston indicates the excellent condition of all parts as they came from the engines. Note the absence of lacquer deposits and that all rings are free. A special detergent in RPM DELO R.R. keeps contaminants harmlessly dispersed in the oil.



481,384 MILES OF SERVICE from this liner during 4 years caused only 0.005" wear, 0.001" taper.





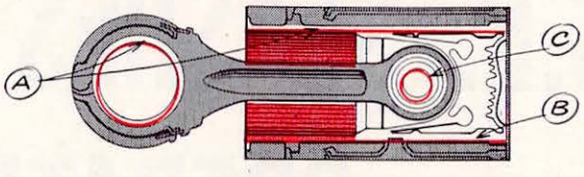
NO VALVE TROUBLE of any kind was encountered. Mileage on these valves, 200,000 since servicing cylinder head.

CON ROD BEARINGS, CARRIER AND WRISTPIN BUSHINGS at the end of four years were in "perfect" condition as this picture shows. Mileage on these parts is 481,384.

RPM DELO LUBRICATING OILS

TRADEMARK "RPM DELO" REG. U.S. PAT. OFF.

How RPM DELO Oil R. R. prevents wear, corrosion, oxidation



A. Special additive provides metal-adhesion qualities...keeps oil on parts whether hot or cold, running or idle.

B. Anti-oxidant resists deterioration of oil and formation of lacquer...prevents ring-sticking. Detergent keeps parts clean...helps prevent scuffing of cylinder walls and valve blows.

C. Special compounds stop corrosion of any bushing or bearing metals and foaming in crankcase.

FOR MORE INFORMATION about this or other petroleum products of any kind, or the name of your nearest distributor handling them, write or call any of the companies listed below.

STANDARD OIL COMPANY OF CALIFORNIA
225 Bush Street • San Francisco 20, California

THE CALIFORNIA COMPANY
P. O. Box 780 • Denver 1, Colorado

STANDARD OIL COMPANY OF TEXAS
P. O. Box 862 • El Paso, Texas

ROAD SERVICE G-E 70-ton locomotives are tops for local freight service. Low cost operation (S.P. spent only 6.9¢ per locomotive mile for fuel), 91.65% availability and versatility make them sure-fire money savers.

S.P. SLASHES LOCAL FREIGHT OPERATION COSTS

WITH G-E 70-TON DIESEL-ELECTRICS

MAXIMUM UTILIZATION

By successful use of these diesel-electrics for road and switching service, Southern Pacific's Portland Division obtains maximum utilization. This performance excels that obtained from steam locomotives. The 70-tonners operate from various terminals in local freight service. Between runs they hustle about the terminal switching cars as needed. The ability of General Electric 70-ton diesel-electrics to perform a variety of jobs has cut S.P.'s operation costs drastically.

The 70-tonner is light enough for operation on light rail (50- to 60-pound) and bridges where axle loading is limited. Its 600-hp engine is powerful enough for yard and mixed train service, yet fast enough for light passenger hauls.

YARD SWITCHING By using their G-E 70-tonners for yard switching between local freight runs, S.P.'s Portland Division keeps them busy on both branch line locals and yard assignments.

91.65% AVAILABILITY

For a twelve month period ending Dec. 31, 1950, Southern Pacific averaged 91.65 availability with its G-E diesel-electrics. The 70-tonners have high availability because:

(1) a 500-gallon fuel tank provides from 24 to 48 hours of continuous operation, depending on the work load,

(2) maintenance can be done during the locomotive's idle hours, and

(3) they are ready for operation at a moment's notice.

76.77¢ PER MILE OPERATION COSTS

ALL EXPENSES—fuel, lubricants, enginemen wages, labor, maintenance, supplies and enginehouse expense for twelve month period ending Dec. 31, 1950—totaled only 76.77¢ per locomotive mile for the 70-tonners. Operation figures kept by Southern Pacific show that fuel cost per mile is only 6.9¢! Other savings are made by eliminating the need for maintenance of fuel and water supplies away from the roundhouse. Investment required for locomotive service facilities is low.

YOUR RAILROAD CAN ALSO SAVE MONEY

General Electric 70- and 44-ton diesel-electric locomotives have an application on your road. For further information on these money savers contact your nearest G-E sales office, or write to General Electric Company, Schenectady, New York, for bulletin GEA-4657A.

You can put your confidence in—

GENERAL ELECTRIC

121-57

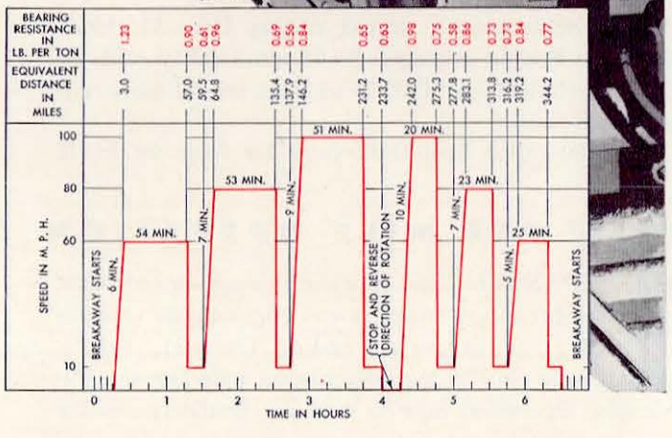
Enginemen know too...

AAR SOLID BEARINGS *have lowest accelerating & running resistance*

Ask an engineman. He'll tell you about comparative bearing resistances. He'll bear out just what tests have proved—how easy it is to throttle up to speed with AAR solid bearing cars. And run there, too!

For solid journal bearings glide on a film of oil—like skaters on ice. There's always minimum resistance during acceleration and running—always the minimum of power required to make a run.

And that's just one more solid bearing *fact*—one more reason why American Railroads have standardized on low-cost solid bearings.



This test of a standard AAR solid bearing, equivalent to a 350 mile run, was conducted at sub-zero temperatures and shows actual resistances in pounds per ton for a fully loaded 5½" x 10" journal.

Be sure to get your free copy of the facts about AAR Solid Journal Bearings

Just write a post card or letter to Magnus Metal Corporation, 111 Broadway, New York 6, N. Y.

MAGNUS METAL CORPORATION
Subsidiary of NATIONAL LEAD COMPANY

"WHY BLAME THE I. C. C. FOR EVERYTHING THAT'S WRONG?"

The above question has been asked of this paper repeatedly in recent weeks, as the result of the critical comment appearing in these pages on the status of boom-time poverty decreed for the railroads by the commission's Ex Parte 175 rate decision. Most of those asking the question have done so because of their acceptance of the popular dictum that the railroads have already "priced themselves out of the market" on the movement of a large part of the nation's traffic. Hence, these critics contend the railroads will, in the long run, be better off with the small rate increase the commission has authorized than they would be with rate increases of the magnitude the railroads asked for.

Those whose opinions run in this channel must realize, however, that their position carries with it the conclusion that the commission knows better than railroad managements do what pricing policy would be best for the railroads. Their position also—by holding that the railroads should enlarge their net earnings by some other device than percentage of increases "across the board"—carries with it the assumption, if net earnings were increased by operating economies or some device other than rate increases, that the commission would allow the railroads to retain these increases. This assumption is rendered utterly untenable by the commission's record of hastening to reduce rates whenever railroad earnings start to yield anything approaching a reasonable return on the investment.

I.C.C. Policy Criticized

The criticism of the Ex Parte 175 decision which has appeared in these pages has not been directed at this decision alone—but at this decision as a culmination of the I.C.C.'s persistent policy of keeping the railroads poor, a policy fully explored and clearly expounded in the treatise to which we have frequently referred, "Rates of Return—Class I Line-Haul Railways, 1941-48," by Sidney L. Miller, Virgil D. Cover, et al.

Railway managements went to the commission in the Ex Parte 175 case with a proposal for a general increase in freight rates as the device which, in their fallible judgment, was most likely to yield the necessary increase in earnings. By denying in such large measure the railroads' petition, the commission took negative action on the only proposal before it for improving the railroads' earnings. In effect, the commission decided that the railroads do not need and do not deserve any more net earnings than they can earn under the small increases which have been granted. Unless this policy can soon be definitely and finally reversed, the railroads had better call in the sheriff.

Truck Costs Four Times RR Rate

With average costs of truck transportation running practically four times the average railroad rate, there is a strong *prima facie* case for the contention of many railroad men that the industry could do a great deal that it has not yet done to improve traffic and earnings by making reductions in "paper rates" on a lot of traffic now moving by truck. If, for the sake of the argument, the validity of this contention be conceded in its entirety, the railroads would still be in jeopardy lest the commission order other decreases in rates sufficient to take away all benefit derived from reductions in "paper rates" and other such devices.

To defenders of the I.C.C. and to critics of the railroads' rate-making policies we ask this question: "If salvation for the railroads is, as you insist, obtainable only by managerial action and not by across-the-board rate increases, then what more effective means of forcing the action you favor could there be than letting the railroads have all the rate increases they ask for? If the

desired results were not then secured, which you are so sure would not happen, then the responsibility would rest squarely on management—as would also the devising of some more effective means of improving railroad earnings."

The answer, then, to the question set forth at the outset of this discussion—why blame the I.C.C. for everything wrong with the railroads?—is that the commission is not to blame for everything that's wrong. On the other hand, however, there is not much use trying to correct anything else that may be wrong until the I.C.C. first concedes to the railroads the right, on the average, to earn if they can for their investors returns as attractive as those of the manufacturing business and the public utilities. I.C.C. policy on railroad earnings isn't all that's wrong with the railroads, but it's the key log in the jam. It is too bad that there are no Gilberts and Sullivans around to immortalize in appropriate words and music the hilarious incongruity of the I.C.C. action in performing its price control on the railroads largely as instructed by the johnny-come-latelies of the Office of Price Stabilization—which body then turns around and does its regulating of automobile prices under a strictly cost-plus formula, and with no interminable delay about it either.

CHAMBERS OF COMMERCE, PLEASE COPY

In a world where self-serving pressure groups are the general rule and do better for themselves than they deserve, it is pleasant, for a change, to find an outstanding instance of a commercial organization which has concerned itself with locating and publicizing the truth about a major controversial issue. We refer specifically to a 100-page printed study titled "The Great Lakes-St. Lawrence Seaway and Power Project," published by the Chicago Association of Commerce & Industry. Spokesmen for Chicago have long been noted for their affection for all schemes to improve waterways at public expense. During the more than 50 years in which the seaway has been proposed, Chicago's business interests have been found generally among the proponents, sometimes among the neutrals, but almost never among the "nays." The city council is on official record as favoring the current seaway and power plan. Two of the city's daily newspapers are strong for it. And while the argumentative and powerful Tribune has not made entirely clear its position on this particular project, it has long been a strong supporter of practically every scheme to spend public funds on inland waterways for navigation in the Mississippi valley. Prior to 1941 the Association of Commerce itself expressed support of the seaway idea as it was revived from time to time.

In the face of this native enthusiasm for waterway projects, the board of directors of the association, last May, voted opposition to construction of the St. Lawrence seaway and power project. The chief reason why they did so, we understand, is because they had read the findings which the association has now made available in printed form.

Authors of the study are Arthur H. Schwietert, traffic director of the association, and Leverett S. Lyon, its chief executive officer. The first-named recently served two terms as head of the National Industrial Traffic League; is currently directing the national loss and damage prevention campaign for the shippers advisory boards; and is nationally known for his forceful, courageous expression of views on subsidy and regulation. Mr. Lyon was, until he joined the association in 1939, an officer of the respected and scholarly Brookings Institution.

This distinguished team has produced a clear-cut, wholly objective discussion of the St. Lawrence project in all its ramifications. Of course, the authors come to conclusions similar to those reached by many other critics of the seaway project: that it is not needed; that it would cost much more than is estimated; that it could not be made self-sustaining by tolls; that it would not be a "seaway" because only about 4 per cent of American registered ships could use its 27-ft. channel. In addition, they provide new and convincing evidence that the seaway is not needed for national defense, and present cogent arguments against the latest hysteria spread by the project's advocates—that high grade Mesabi iron ore is giving out and that protected, inland steel mills will have to shut down if the seaway isn't built at once.

The remarkable fact about the pamphlet is, however, that at no point is mention made of the effect of the seaway for good or ill on Chicago itself. The authors confine themselves to assaying its effect on the welfare of the country as a whole.

ELEMENTS OF CONVENTION SUCCESS

There are many factors which contribute to the success of such meetings as those held simultaneously by the five Coordinated Mechanical Associations and the Association of American Railroads' Electrical Sections at Chicago, September 17-19. First is the character of the organizations themselves, determined by their purpose, by the soundness of their plan of organization, and by the effectiveness with which their programs measure up to their objectives. Then there is the matter of the geographical location of the meeting place. A third factor is the associated exhibit of appliances and materials when there is one.

There can be little doubt that the associations referred to here, since they have been working together, have developed characters which contribute definitely to their growing influence. Several are steadily increasing their

membership. Programs are constructive and the organizations are being effectively operated.

Over the years there have been numerous ideas as to the character of meeting places desirable for associations of railway men. Some of the smaller organizations used to hold each annual meeting in a different city. Another idea long in vogue is to meet at a resort where the vacation atmosphere is dominant, particularly when an exhibit is involved. This has lost much of its popularity with the railroads largely because of the excessively elaborate entertaining which it inspired. Now Chicago has become well established as a central location where meetings, with or without exhibits, can be held in an atmosphere of serious business and with little time allowed for extraneous activity. This tends to keep entertainment within reasonable bounds.

That these characteristics of Chicago meetings do not militate against their success seems to be definitely proved by the way in which attendance has been growing. Registration at this year's Coordinated Association meetings, including that of the Electrical Sections, was over 4,500, including 2,500 members or railroad guests and 1,320 railway supply men. After allowing for the supply men who also registered as members, the railroad attendance at these meetings was record-breaking.

An outstanding exhibit, such as that organized by the Allied Railway Supply Association at the Hotel Sherman this year, will be a stimulant to the attendance of railway men at future conventions. The excellent attendance at previous meetings of these associations encouraged the 110 exhibitors to fill all the space available. Location is of equal importance to the railroad associations and to the exhibitors. The growing success of the fall mechanical association meetings and exhibits suggests that the right location and atmosphere for attention to business have been found.

IS YOUR SLIP SHOWING?

The heavy construction industry has long been under scrutiny by a throng of avocational contractors commonly called "sidewalk superintendents." Less known perhaps, but usually better informed, are members of a similar company who might be designated as "coach seat superintendents"—in other words, the daily commuters by rail.

Unlike their sidewalk cousins, the coach seat superintendents often "supervise" the very same railroad operation for 20, 30, and, in some recorded cases, as high as 50 years. Also unlike the onlookers at construction jobs, every coach seat supervisor is a patron of the company he watches. He may also be a shipper, a stockholder or someone whose personal opinion may have influence on the welfare of the road or even on the railroad industry as a whole.

Thus any railroad blessed, or cursed, with suburban business has an obligation to itself and to all other railroads to run that service with precision and care. Some roads accept this obligation, and the manner in which they conduct their suburban operations has engendered great good-will and public confidence. Unfortunately, not all commuter-carrying roads see their task in this light. Some appear content to run the same schedules for years on end without concern that things do not run smoothly; that some overloaded trains "stab" those following with monotonous regularity; that existing schedules are often too "tight" for some trains and too "flabby" for others; and that broken seats, light fixtures and leaks in the roof remain unrepaired for weeks.

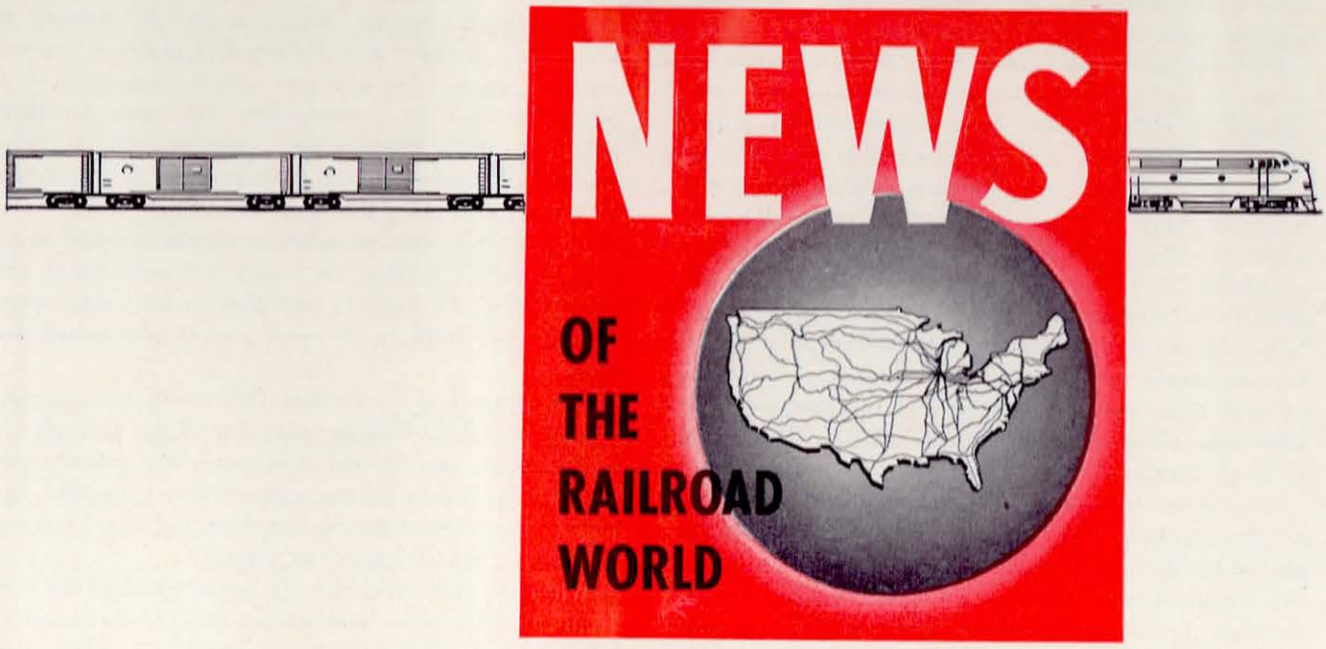
Most important is the fact that coach seat superintendents see these failings every day. When they go uncorrected for months and even years, the suburbanites form an opinion of the management that is harmful, not only to the railroad directly involved, but also by transference to "the railroads" in general.

When the post office recently began withdrawing mail from suburban trains and placing it on highway trucks, a vacuum was created in many suburban schedules that required the withdrawal of a few trains but permitted acceleration of those remaining to handle passengers. Some roads immediately arranged to tighten their suburban schedules as the new conditions warranted, but others did not. For example, as long as 45 days after their mail traffic had gone to the trucks, ex-mail-carrying suburban trains of one road could be seen creeping between stations at a snail's pace because the old schedule was still in effect.

Coach seat superintendents drop their newspapers and "report for duty" the moment any service irregularity becomes apparent. Immediately, railroad management goes on trial. Is *your* slip showing?

Perhaps the railroads have only their own efficiency to blame for the fact that the public generally takes their services for granted. Their services are, on the whole, made inconspicuous by their smoothness of operation. When one travels by automobile one expects the delays, detours and dust made necessary by road repairs and new construction. The railroads, in contrast, somehow manage to rip up roadbeds, replace thousands of ties and rail sections each year and remodel bridges without any breaks in service. And the weather, of which one is acutely conscious in air travel, is not even a conscious factor (to the passenger) in railroading, short of a blizzard or hurricane.

Somewhere behind the scenes of railroading there are roundhouses, repair shops, marshaling yards, locomotive plants and hundreds upon hundreds of employees who switch cars, maintain signals, wash windows, paint, load ice, remove refuse, walk tracks and design trestles, not to mention the management which keeps the whole thing running. They are there, but most of us are not aware of them, just as the gradual elimination of grade crossings has reduced our awareness of how many cars there are on passing freight trains. Only a child these days seems to appreciate the breath-taking nature of American railroading, yet railroading today, if adults were to think about it, is ever so much more impressive and thrilling than when we were children.—*From the Baltimore (Md.) Sun.*



Fast Write-Off Ban Will Be Opposed

Railroad group to ask formal hearing on I.C.C. proposal

Accounting officers representing 57 railroads decided last week to join in asking the Interstate Commerce Commission to rescind its recent notice setting forth a proposed order under which carrier reports to the commission would no longer reflect accelerated amortization of equipment and facilities acquired to handle defense-traffic loads. The presentation to the commission will ask for a formal hearing on the proposed order, if the request for a rescinding of the notice is denied.

The notice announced a new commission policy which would have the effect of requiring normal depreciation accounting with respect to the facilities involved—unless it were shown "definitely" that they would have "no use in transportation service after the emergency." (*Railway Age* of September 3, page 38.) This would not automatically end accelerated-amortization accounting for income tax purposes, but some railroad officers are fearful that it might make more difficult the obtaining of the required certificates of necessity from the Defense Production Administration.

The accounting officers representing the 57 opposition roads made their decision to petition the commission at an October 3 meeting in Washington, D. C. On the previous day, they had participated in a meeting attended also by accounting officers representing 17 additional roads. Discussions at that October 2 meeting indicated that 14 of these 17 were supporters of the commission proposal, while the other three were neutral.

Because of this difference of opinion among its member roads, the board of directors of the Association of American Railroads decided not to authorize an association presentation to the commission. There have been reports to the effect that some of the roads supporting the commission may make a presentation to that effect. The commission recently set back, from September 27 to October 22, the deadline for the filing of presentations.

At their October 3 meeting the accounting officers of the opposing roads formed a "committee of six" to frame a proposed petition to the commission. This will be submitted for final acceptance to all 57 roads now involved and to others interested in joining the opposition group.

"Fictitious Accounting"

As to fears that adoption of the commission's proposal might make more difficult the obtaining of certificates of necessity from D.P.A., it has been argued that the accounting involved might be considered "inconsistent" with representations made to D.P.A. The commission proposal would represent "fictitious accounting" is the way another accounting officer has put it. Another has asserted that the proposal ignores the "excessive loss in service value during the emergency due to intensive use" of the equipment and facilities.

Other opponents say that it would produce "inflated net income," and that the "probable residual value" of the equipment and facilities after the emergency is taken into account by D.P.A. when it permits accelerated amortization of only a portion of the expenditures involved. The prospective effect on tax payments to the states is also the concern of some accounting officers, who point out that such levies are often based on income as shown in reports to the I.C.C.

On the other hand, accounting officers

I.C.C. Asked to Reconsider Its Ex Parte 175 Decision

The nation's railroads announced on October 3 that they will ask the Interstate Commerce Commission to reconsider its Ex Parte 175 decision and authorize the full 15 per cent increase in freight rates originally requested. This would mean further increases of approximately 6 per cent in the east and 9 per cent in the south and west.

Spokesman for the roads said increases previously authorized in Ex Parte 175 were insufficient to enable them "to maintain their properties so as to provide adequate and efficient service to shippers and to fulfill their obligations to the national defense."

The recently authorized Ex Parte 175 increases amounted generally to 9 per cent in eastern territory, 6 per cent in the south and west and 6 per cent on interterritorial traffic (*Railway Age*, August 20, page 55).

supporting the commission's proposal have contended that tax relief does not shorten the service life of the equipment, and that the post-war accounts have been distorted by the accelerated amortizations of World War II.

Additional Support

Other support for the commission is based on a contention that accelerated-amortization tends to upset arrangements for payments into sinking funds, capital funds, etc. Also, the commission's supporters have suggested that higher-than-normal depreciation rates could be obtained by any road—"if they could be justified."

In recent discussions of the matter there has been revived the so-called tax-equalization idea which was submitted to the A.A.R. Accounting Division sometimes ago by Director C. W. Emken of the commission's Bureau of Accounts and Cost Finding. This idea contemplates establishment of a new tax-equalization account in the net railway operating income group. During the period that amortization allowances are obtained for tax purposes, this new account would be charged with the difference between the tax saving so obtained and the amount of tax saving that would have obtained if normal depreciation charges had been claimed. The amounts so charged would be credited to a reserve account and would, subsequent to the amortization period, be cleared by monthly credits over the remaining life of the property.

While some roads are urging this alternative, it has found no substantial support among opponents of the commission's proposal. As one such opponent has put it, the "most that can be said" for the tax-equalization plan is that it "mitigates the error which will result from the proposed order of the commission."

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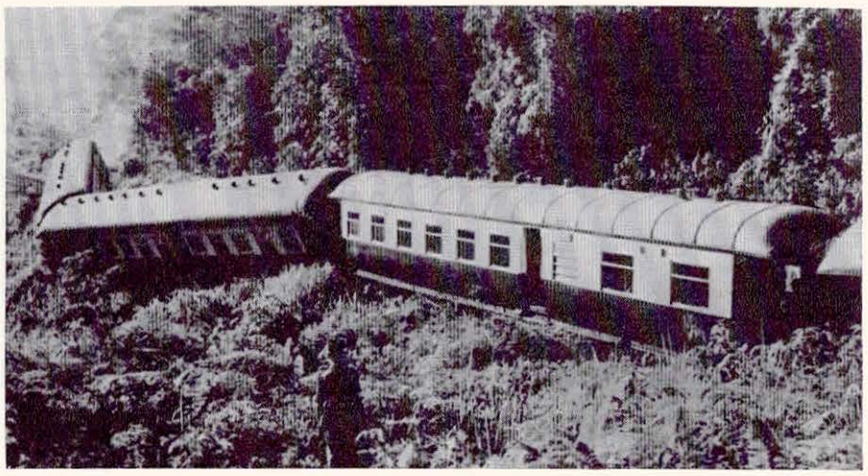

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Refrigerator	2,068	0
Other	205	20
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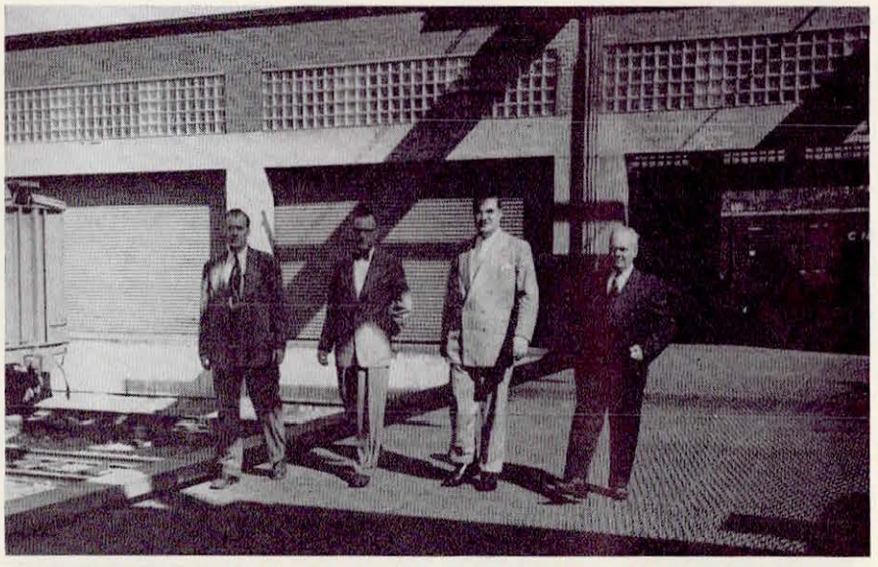

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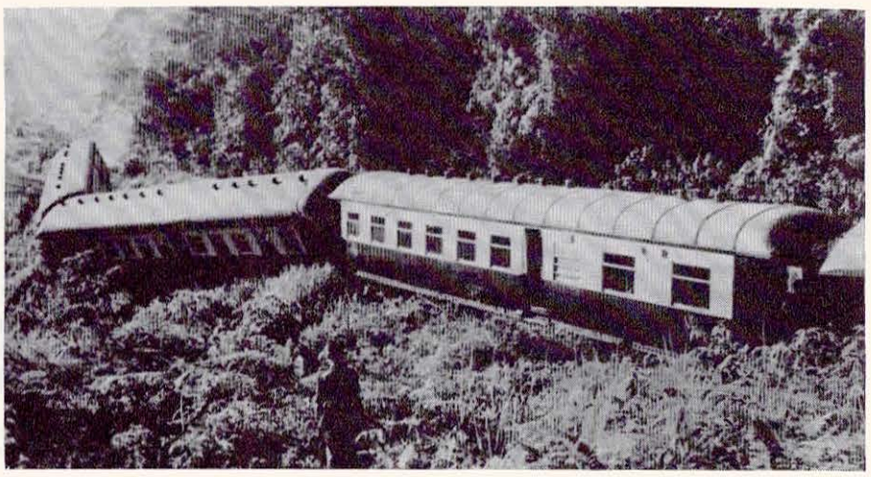

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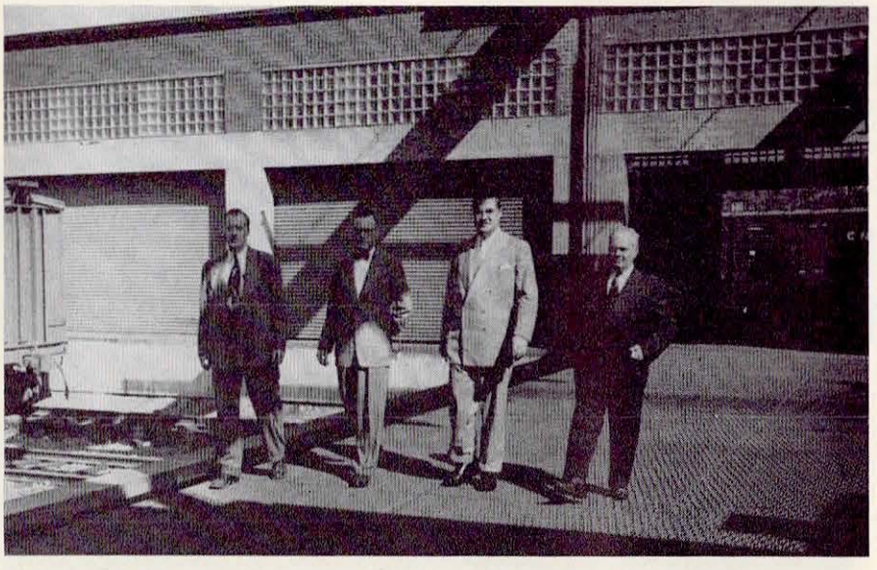

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F. E. Russell of the Railroad Transport Division of D.T.A. is vice-chairman of the committee. In commenting on his role as chairman of the committee, Mr. Knudson said:

"I have been asked to serve as general chairman of this committee and have appointed Colonel Russell of D.T.A., who has been temporarily relieved of his regular duties in the Railroad Transport Division to devote full attention to the drive, as active chairman.

"The transportation industry is the country's greatest single source of iron and steel scrap supply. Normally, the railroads alone provide some 12 per cent of purchased scrap recovered. The committee will work in cooperation with the scrap campaign which is being carried on so effectively by the railroads."

Bortz Heads Railroad And Airline Wage Board

Nelson M. Bortz has been appointed chairman of the Railroad and Airline Wage Board which will handle wage-stabilization cases in the railroad and air transport industries. The board, which will have two other members, was created September 27 by Eric Johnston, administrator of the Economic Stabilization Agency.

It will pass on voluntary wage adjustments, as did the temporary panel which functioned for about a month under the chairmanship of Dr. William M. Leiserson (*Railway Age*, August 27, page 32). Mr. Bortz has been chief of the Industrial Relations Division of the Bureau of Labor Statistics, U. S. Department of Labor.

Air Board Separates Subsidies from Mail Pay

Mail pay received by domestic certificated air lines during the fiscal year ended June 30 included subsidy payments totaling $34,565,000, according to a report issu d by the Civil Aeronautics Board. The report also calculated that subsidies totaled $270,000,000 during the 13-year period since passage of the Civil Aeronautics Act in 1938.

In the report the board effected an "administrative operation" of the service mail payments from subsidy mail payments. The report came at a time when Congress is progessing legislation to require that such payments be separated.

The C.A.B. put at $61,934,000 the fiscal 1951 mail payments to the air lines. Its separation formula showed that $27,369,000 was "service pay," and $34,565,000 subsidy, as noted above. The 13-year subsidy of $270,000,000 was calculated in like manner, the total mail payments for that period having been $457,000,000.

The separation formula involves grouping the air lines on the basis of revenue ton-miles per station served, and setting a "service rate per mail ton-mile" for each group. Seven groups were established, with "service rates" ranging from 45 cents to $7.26 per mail ton-mile. Subsidies are found when mail payments exceed these "service rates."

Meanwhile, the board found that "the soundness of Congressional policy as expressed in the Civil Aeronautics Act is clearly evidenced. . .by the striking growth of the domestic airline industry."

Wilson Sees Open-Top Car Shortages This Winter

Likelihood of a "severe shortage" of open-top freight cars throughout the coming winter was predicted by Defense Mobilizer Charles E. Wilson in his latest report on the mobilization program. The report was submitted to President Truman last week.

The pinch for most types of shippers during the approaching fall peak will be somewhat less than last year, although spot shortages continue to show up in railroad transport, Mr. Wilson reported. In addition to the predicted shortage of open-top cars, he said the need for "substantial additions" to the tank car supply — particularly pressure tank cars — is also expected to continue.

"In the third quarter, fewer than 20,000 freight cars were produced, partly due to materials shortages, but also due to strikes in some of the major plants," Mr. Wilson said. "Freight-car utilization improved, however, and can be further improved by heavier loading, faster turn-around, better scheduling, and reducing to a minimum the number of cars laid up for servicing."

As to highway freight traffic, Mr. Wilson said it is "still increasing rapidly." He added that this increase, "coupled with a long-standing lag in adequate maintenance of the highway system itself," presents a "steadily increasing" problem.

O.P.S. Lifts Price Freeze On Untreated Ties in East

Untreated railroad cross ties and switch ties produced in the eastern part of the United States have been removed temporarily from price control, the Office of Price Stabilization has announced. The exemption, effective October 3, will continue until O.P.S. issues a "tailored ceiling price regulation" for the industry or until January 1, 1952, whichever is earlier.

In the East ties are produced mainly by farmers and small mills, O.P.S. said. The agency said many of these small producers diverted their output to lumber in 1949, and when the railroads resumed heavy purchases of ties in the fourth quarter of 1950 there was no uniformity in prices.

When prices were frozen in January 1951, ceilings were so low in certain areas that some of the roads could not obtain their requirements, the agency said. The present exemption was made to permit adjustments in prices and stimulate production of untreated ties.

The agency defined the "eastern part of the United States" as that portion east of the 100th Meridian except for North and South Dakota.

National Transport Policy Urged by Great Lakes Board

A single government agency to enforce statutes regulating transportation, and which would report directly to Congress, is called for in a policy statement on national transportation approved at the recent meeting of the Great Lakes Regional Advisory Board in the Hotel Statler, Detroit.

The policy—recommended by the board's legislative committee, headed by Andrew H. Brown, transportation commissioner of the Cleveland Chamber of Commerce—also calls for elimination of subsidies in commercial transportation; no compulsory consolidations of individual transportation companies; retirement of government from common carrier transport service and sale of its barge lines to private interests; and elimination of parcel post service, except in some rural areas not served by private agencies.

Federal and state governments, the policy statement added, should cease developing new, or expanding present, facilities for commercial transportation unless users thereof are willing and able to pay for them; while present laws regulating transportation should be modified to reduce governmental jurisdiction and broaden management responsibility. It also was urged that establishment of transportation rates by direct legislation be opposed and that excise taxes on charges paid for transportation service be repealed.

New N.M.B. Secretary Was In Railroad Service 20 Years

Eugene C. Thompson, the National Mediation Board's new executive secretary, was in railroad service for more than 20 years prior to 1936. Since that time he has been a member of the board's staff of mediators, and has served as acting secretary on several occasions in recent years.

As noted in *Railway Age*, October 1, page 135, Mr. Thompson succeeds the late Thomas E. Bickers in the executive secretaryship. Mr. Bickers died on September 19 after a career in labor relations work which extended over a period of more than 30 years (*Railway Age*, September 24, page 67).

Mr. Thompson was born June 17, 1893, at Lincoln, Kan., and was graduated from Washburn College with an A. B. degree in 1914. The following

year he entered railroad service at Topeka, as a stenographer in the Atchison, Topeka & Santa Fe's stationery department. In 1916, he was transferred to Amarillo, Tex., and then to Kansas City, Mo., where he served as secretary to the superintendent of the Santa Fe's Kansas City division.

Mr. Thompson entered the service of the Kansas City Southern in 1917 as secretary to the general superintendent of transportation. Except for a period of military service in 1918-

Eugene C. Thompson

19, followed by a short period of service with the Texas & Pacific in Dallas, Tex., he remained with the K.C.S. until March 1936. His positions with that road included those of senior clerk, general manager's office, secretary to general manager, chief clerk to superintendent—personnel, and chief clerk to vice-president and general manager.

Mr. Thompson's service as an N.M.B. mediator culminated in his assignment to the board's Washington, D. C., headquarters as head mediator, a position which he held for several years prior to his appointment to the executive secretaryship.

Stepped-Up Scrap Collection Urged

An intensified effort on the part of railroads to collect scrap iron, steel and other metals to meet mounting steel production needs was urged jointly last week by William T. Faricy, president of the Association of American Railroads, and James M. Hood, president of the American Short Line Railroad Association.

"This campaign," they said, "involves more than getting out what might be called the normal flow of scrap, which is done on most railroads with a promptness and thoroughness recognized by government authorities. It calls for extra effort to get out and turn in extra scrap such as obsolete materials, machines, fixtures and structures."

The presidents of the two associations have sent their member roads a list of suggestions of places to look for materials that are no longer of use in original form, but which are precious as the extra scrap steel mills must have. Besides obsolete machinery and equipment, the list includes inventory stocks of repair parts no longer needed because of retirement of certain classes of steam locomotives, abandoned trackage, and potential dismantling projects such as old bridges.

Mr. Faricy and Mr. Hood also recommended that each railroad set up a special inter-departmental committee with executive direction to expedite the search for scrap and to start it on its way to mills and foundries, where it may help produce the castings and the steel which the railroads themselves must have.

The railroads are one of the main sources of high-grade scrap metals. During the last five years, they have turned in more than 20,000,000 tons of scrap, or 14.3 per cent of all iron and steel scrap obtained from all sources. During the same period, 9.4 per cent of steel output was allocated to the railroads or for use in the railroad supply industry.

D.T.A. Conducts Survey Of Warehouse Facilities

A survey of the nation's public warehousing and storage facilities is being conducted by the Defense Transport Administration, Director H. K. Osgood of the agency's Warehousing and Storage Division announced last week.

The survey covers general merchandise, household goods, and cotton warehouses. It does not include refrigerated warehouses and facilities used for bulk storage of commodities or other special purposes.

Purpose of the survey, Mr. Osgood said, is to provide D.T.A. with information needed to enable it to present the industry's needs to other government departments and agencies. It will also enable D.T.A. to plan for adequate storage facilities for defense purchases requiring space in the already-tight public warehouse system.

Freight Car Loadings

Loadings of revenue freight in the week ended September 29 totaled 864,573 cars, the Association of American Railroads announced on October 4. This was an increase of 263 cars, or 0.03 per cent, compared with the previous week; a decrease of 15,613 cars, or 1.8 per cent, compared with the corresponding week last year; and an increase of 206,445 cars, or 31.4 per cent, compared with the equivalent 1949 week, when coal miners were on strike.

Loadings of revenue freight for the week ended September 22 totaled 864,310 cars; the summary for that week, as compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS

For the week ended Saturday, September 22, 1951

District	1951	1950	1949
Eastern	142,264	149,089	121,082
Allegheny	171,483	174,525	122,319
Pocahontas	67,708	65,650	20,426
Southern	131,713	136,189	103,309
Northwestern	151,633	146,022	129,669
Central Western	134,411	134,729	118,743
Southwestern	65,098	64,325	45,920
Total Western Districts	351,142	345,076	294,332
Total All Roads	864,310	870,529	661,468
Commodities:			
Grain and grain products	53,837	50,012	50,614
Livestock	16,112	14,563	15,529
Coal	158,319	164,286	36,075
Coke	16,254	15,229	10,487
Forest products	45,761	50,138	40,652
Ore	86,800	83,086	59,298
Merchandise l.c.l.	75,868	90,029	86,692
Miscellaneous	411,359	403,186	362,121
September 22	864,310	870,529	661,468
September 15	850,812	866,658	743,022
September 8	732,908	751,449	623,962
September 1	829,391	851,841	703,934
August 25	838,587	838,665	747,211
Cumulative total 38 weeks	29,477,675	27,618,673	27,154,850

Pooling Plan Approved

Division 3 of the Interstate Commerce Commission has approved a pooling arrangement under which five railroads have been handling l.c.l. from New York to Miami, Fla. At the same time, the division found that operations under the plan since July 1, 1949, have been "without specific approval and authorization of the commission in violation of section 5(1) of the act."

Parties to the arrangement are the Pennsylvania, the Richmond, Fredericksburg & Potomac, the Atlantic Coast Line, the Seaboard Air Line, and the Florida East Coast. The case was docketed as No. 30717.

N.P.A. Seeks To Break Log-Jam of C.M.P. Orders

The National Production Authority has ruled that any unfilled order calling for third-quarter delivery of controlled materials which was not shipped by October 7 must be charged by a customer to his fourth-quarter C.M.P. allotment. The ruling, embodied in amendments to CMP Regulation 1, was described in an N.P.A. press release as "a decisive move to break the log-jam of undelivered orders for steel, copper and aluminum."

Previously, an authorized controlled material order accepted by a mill for delivery during the third quarter might be filled at any subsequent time and still be charged against a third-quarter allotment. The new ruling "is designed to assure acceptance and delivery of all orders placed against fourth-quarter allotments," N.P.A. also said.

A.A.R.'s Electrical Sections Consolidated

The board of directors of the Association of American Railroads has decided to consolidate into one section the existing Electrical Sections of the association's Engineering and Mechanical Divisions. The board's action

was taken at its September 28 meeting in Washington, D. C.

It is expected to "strengthen the association's organization in view of the increasing use of electrical equipment on railroads," the announcement said. It also explained that the sections involved are those which "deal with electrically driven equipment and other electrical installations used in the construction, operating and mechanical departments of railroads."

Increased Parcel Post Rates Became Effective October 1

Increases in parcel post rates, which are expected to yield more than $100 million a year, became effective October 1. They are the increases to which the Interstate Commerce Commission gave its consent in a report issued last May.

The additional $100 million would raise parcel-post revenues by about 25 per cent—from about $400 million to approximately $500 million. However, the higher basis will leave parcel-post rates on general merchandise traffic below the Railway Express Agency's charges on like traffic. (*Railway Age*, May 28, page 59.)

Air Board Launches Probe Of "Irregular" Services

The Civil Aeronautics Board has instituted an investigation of "the non-scheduled air services now performed by approximately 63 large irregular air carriers which are temporarily authorized to conduct irregular and infrequent air transportation of passengers or cargo, but not mail."

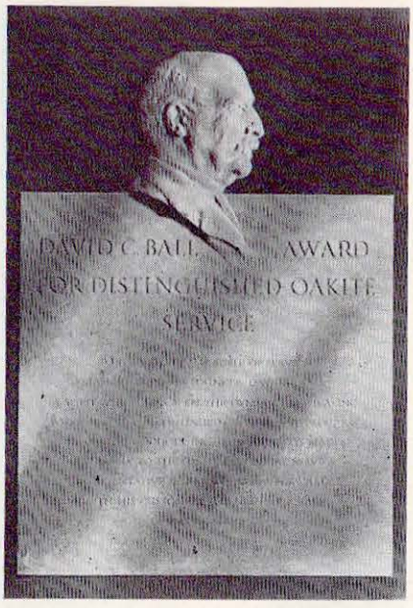
This was announced in a C.A.B. statement of September 21, which went on to explain that the scope of the investigation will include "all matters relating to and concerning non-scheduled air-transport operations, . . . and whether or not there is a need for this non-scheduled transportation in addition to and supplemental to the regular. . .air transportation performed by the scheduled air carriers over specific routes."

The board's latest previous investigation of non-scheduled air service was completed in 1946. The board believes, as the announcement put it, that "it is now desirable to obtain current economic and other information concerning irregular air carrier operations to assist in determining future policy with respect to this phase of American commercial air transportation."

I.C.C. Publishes Rules for Passes

The Interstate Commerce Commission has issued a 35-page booklet embodying its "Regulations to Govern the Forms and Recording of Passes." The booklet, priced at 15 cents per copy, is for sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

The commission order providing for consolidation of various outstanding pass regulations for issuance in the booklet was dated May 10, and the consolidated regulations became effective July 1. The change, the commission's order stipulated, would bring the regulations "into harmony with requirements of the Administrative Procedure Act as to the form of published regulations."



TO PERPETUATE THE MEMORY of David Clifton Ball, founder of Oakite Products, Inc., and chairman of its board at the time of his death last March, the company has established this award, in the form of a bronze plaque "to be presented annually to the member of the Oakite technical field organization who has rendered the most outstanding service to industry during the year"

Ingersoll Quits Presidency Of Federal Barge Lines

A. C. Ingersoll, Jr., has resigned from the presidency of the government-owned Inland Waterways Corporation, operator of the Federal Barge Lines. Reports indicated that the resignation came after Secretary of Commerce Sawyer had rejected a proposal that the Barge Lines be sold to a group of its employees, including Mr. Ingersoll.

The secretary's letter accepting the resignation announced a policy of not considering sale to any present or former employees of I.W.C. "As you well know," Mr. Sawyer said, "I, too, have had as a final goal the transfer of this enterprise from government to private operation under the conditions which the Congress has laid down. Meanwhile, we are obliged to operate the line and this cannot be accomplished successfully by employees who are giving their attention to the possibility of winding it up. In order to make my position clear, I will not, as a matter of public policy, consider the sale of the Inland Waterways Corporation to any of its employees, past or present."

The Sawyer letter also announced the appointment of W. G. Oliphant as acting president of I.W.C. Mr. Oliphant has been general traffic manager.

Board Asks A.A.R. to Act In Oregon Car Shortage

The Pacific Northwest Advisory Board, meeting in Yakima, Wash., has asked the Association of American Railroads to "take such emergency measures as will be effective in distributing equipment" so that the equipment shortage on the Southern Pacific in the state of Oregon may be equalized with other sections of the country. The request was put in the form of a resolution and passed by the membership because the situation was so "severe" and because "steps were not taken sufficiently in advance to correct it."

Before over 200 shippers, receivers and railroad representatives attending the meeting, Owen Clarke, retiring chairman of the Washington Public Service Commission, criticized the increasing influence of government regulations in management of the railroad industry. He deplored the plight of the railroads, in that they are not being permitted to manage their own property and affairs in a way that would insure proper return on investment.

E. W. Coughlin, manager of the Railroad Relations Section of the A.A.R.'s Car Service Division, urged shippers to make the most efficient possible use of existing equipment to help relieve the pressing demand on the car fleet. He said all possible steps were being taken to relieve the current shortage on the S.P. in Oregon.

Lewis Pilcher, executive vice-chairman of the A.A.R.'s Freight Claim Division told board members of

(Continued on page 54)

MORE NEWS ON PAGE 54

Additional general news appears on page 54, followed by regular news departments, which begin on the following pages:

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Car Service	**67**
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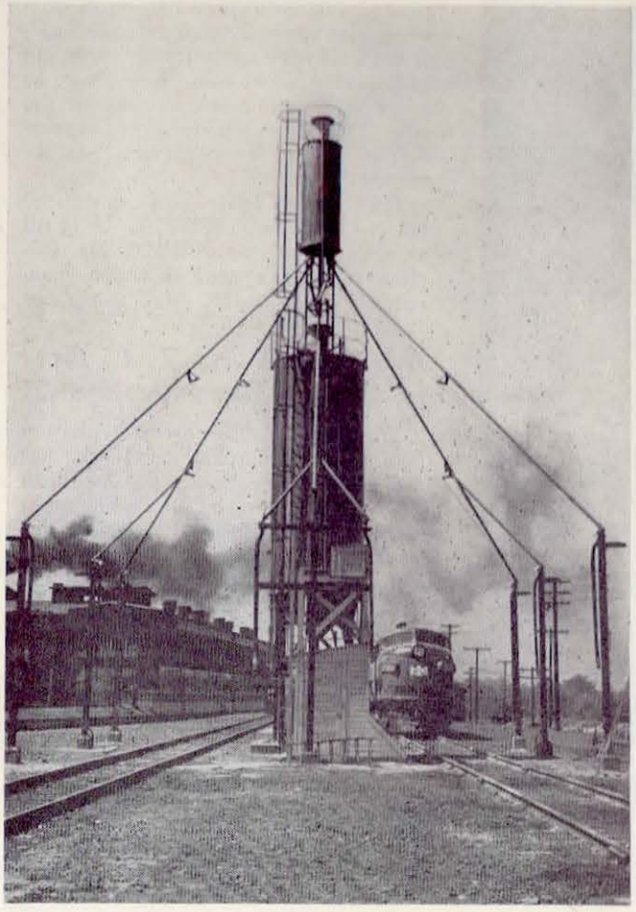
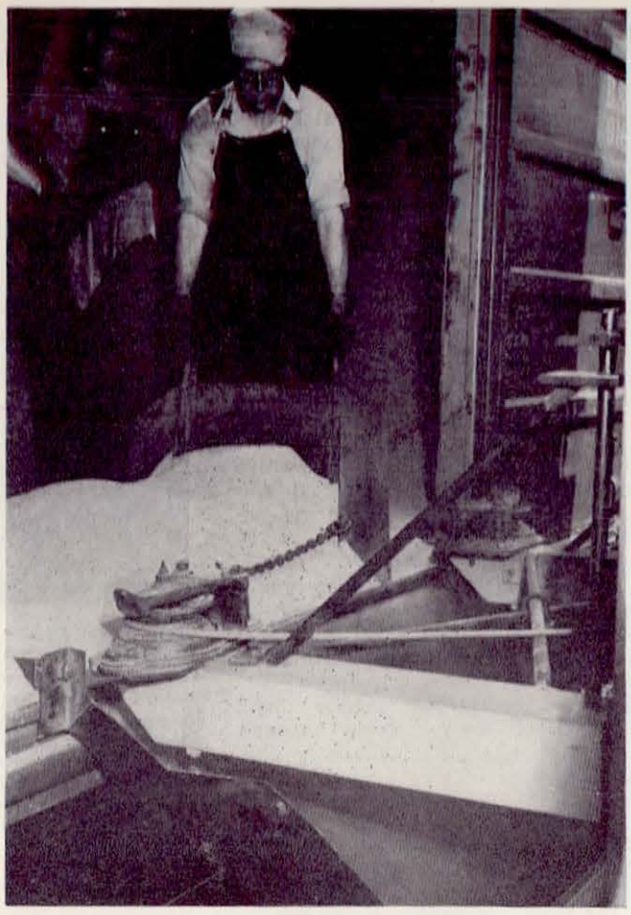


With a storage capacity of 70 tons of sand, this plant is almost fully automatic and can service all boxes of a diesel locomotive unit at one spotting on each track. Upper storage bin supplies sand by gravity



A Clark shovel and hoist relieves the station attendant of a great deal of hard work when unloading a carload of sand. Equipped with a reversible clutch it pulls the shovel and its load to the unloading chute, is easily pulled back

Now—An Automatic Sanding Plant

New diesel-servicing facility built by the B. & L. E. at Albion, Pa., keeps supply of sand available at all times

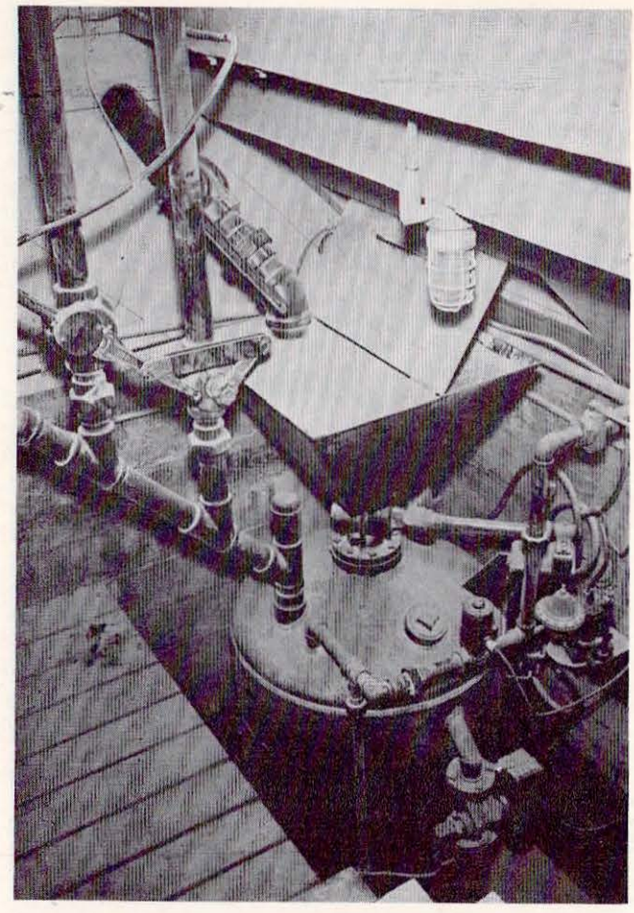
A sanding plant for diesel locomotives which needs only part of the time of one attendant, and which keeps sand available in the delivery hoses as long as there is any in the facility, has been built by the Bessemer & Lake Erie at Albion, Pa. Erected between two service tracks, the Albion plant can supply sand to all fill-up boxes on a locomotive unit at one spotting on each track, and can simultaneously service units on both tracks.

The major components of this sanding station are a sand receiving-and-elevating unit, storage-bin units, and the delivery apparatus. The storage capacity of the plant is 70 tons of predried silica sand.

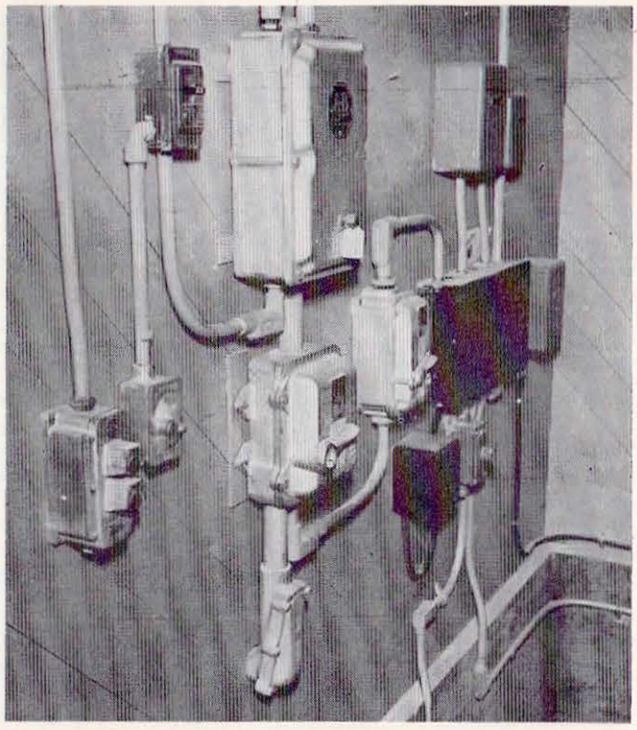
The receiving-and-elevating unit is housed in a small building, and includes an unloading chute, a hopper and screen, and a drum from which, by means of compressed air drawn from a terminal supply line, the sand is expelled and elevated in riser pipes to the storage bins. Unloading of cars is facilitated by a Clark shovel and reversible hoist. With this device the sand-station attendant merely has to pull the scoop shovel back from the car-door opening after the hoist has drawn it with a load of sand to the unloading chute. Whenever the shovel is stopped in its backward movement from the chute, an automatic clutch engages to tighten up the hoist line attached to the shovel, and to cause the shovel to be pulled to the car doorway.

In flowing down the chute to the hopper above the drum, the sand passes through a fine-mesh screen, which culls out all debris and refuse that may have become mixed with the sand. The screen is cleaned when necessary.

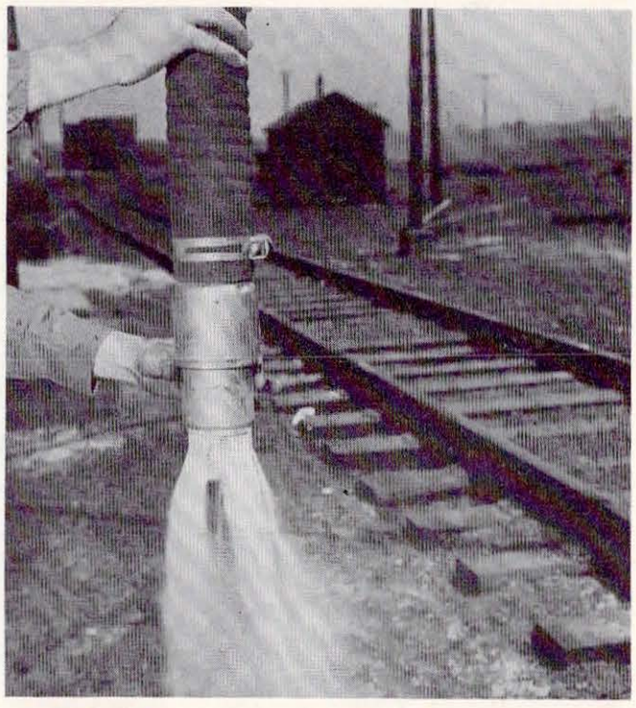
The sand drum holds about 28 cu. ft. of sand, or the equivalent of about 1.5 tons. Installed externally to its



The sand elevating drum is entirely automatic in its operation. It loads a 5-ton service bin and a 65-ton storage bin when a carload of sand is shipped to the plant, and it keeps the service bin refilled as long as there is sand



Part of the electrical controls and timing devices that make this station automatic in operation. The case on the extreme left houses red warning signals that warn the station attendant when the plant is running out of sand



The delivery hoses have sand valves that provide a 3-in. opening for the fast flow of sand

side is a vertical pipe that joins the upper and lower ends of the drum, and which has an electric-eye control switch at its mid-length. This control and a timing device function when the drum is filled and the sand spills over into and fills the external pipe to block the beam of light of the electric-eye device. When this happens, a 3-in. inlet valve at the top of the drum is electrically caused to close, shutting off the delivery of sand from the hopper, and another electrically controlled air-operated valve at the top of the drum opens the air-supply line to build up pressure within the drum. In a matter of seconds the air pressure becomes sufficient to blow the sand from the drum through a riser pipe to one of two elevated storage bins.

After the sand has been blown from the drum, the level of the sand within the drum's external pipe lowers by gravity until the light beam again falls on the photo-electric cell of the electric-eye control. At this point the electric controls and timing device again take over, closing the air-supply valve, opening another valve to release the pressure within the drum, and opening the 3-in. sand inlet valve at the top of the drum so that sand again flows from the hopper until the drum is full.

Storage Facilities

The two storage bins consist of a 5-ton bin mounted directly above a 65-ton unit. The 5-ton bin is the one from which the sand is delivered to locomotives. When unloading a car of sand first the smaller bin and then the larger are filled. When the supply of sand in the 5-ton bin becomes exhausted, it is refilled from the larger bin. In this operation the sand from the 65-ton bin flows back into the hopper and drum to be blown into the small bin.

Each bin has two electric diaphragm-type bin switches

installed on its side, one near the top and the other near the bottom, which are used to determine when the bins are full or empty and either to actuate air-operated valves accordingly or to flash a red signal within the unloading house. When the small upper bin has been filled, the weight of the sand on the upper diaphragm switch causes the air to be cut off and pressure released in the sand drum, resulting in the opening of the 3-in. valve at the top of the drum, thus causing it to be refilled. Delivery of sand to the 65-ton bin is then started.

Aside from unloading the sand from the car, all operations in the plant described up to this point are automatically controlled. Three movements of valves are made manually, one being that required when the 5-ton bin has been filled with sand and the need arises to fill the 65-ton bin, and two others being required when both bins have been filled. These manual movements, however, are only made when a car of sand is being unloaded.

Filled Station Is Fully Automatic

The discharge riser pipe from the sand drum diverges into two riser pipes. One of these leads to the 5-ton bin, while the other leads to the top of the 65-ton bin. A shut-off valve has been installed near the point of divergence in each of these riser pipes. The operating stems of these two valves are so connected that, when one is in the "open" position, the other is closed.

With the 5-ton bin filled and the sand drum also filled, but with the air pressure cut off, the station attendant manipulates the interconnected stems of the valves in the riser pipes, thereby automatically opening the air-supply valve to the drum, closing the valve in the riser to the 5-ton bin and opening the valve of the riser to the 65-ton bin. The sand drum then automatically goes through its cycles of being filled and discharging its sand contents to the 65-ton bin until all of the sand (50 tons) has been unloaded from the box car. The station attendant then again manipulates the stems of the valves in the risers and also opens a valve in a 4-in. line connecting the bottom of the 65-ton bin with the chute hopper. The attendant can then leave and the plant will function automatically.

The upper storage bin supplies sand by gravity to 12 delivery hoses, placed three on each side of each track. Each hose is fitted at its delivery end with a 3-in. sand valve that is opened and closed by an encasement ring.

When the top storage bin is nearly emptied by withdrawals from the delivery hoses, the lower diaphragm switch in this bin is relieved of its sand pressure, causing the upper bin again to be filled from the drum, with the supply being drawn from the 65-ton bin. When the sand level lowers to within two feet of the bottom of the large bin, the lower diaphragm switch of this bin flashes a red warning light in the drum house where the attendant, making his routine inspection, can observe it and order another car of sand.

This sanding plant was designed and built throughout by the Ross & White Co., Chicago.

Engineering Shortage Becoming Acute

The dwindling supply of American engineers was termed "alarming" by a prominent body of engineers, educators and industrialists during a convocation on September 28 in Stephen Foster Memorial on the campus of the University of Pittsburgh. The meeting was arranged by the Engineering Manpower Commission of the Engineers Joint Council and by the Engineers Society of Western Pennsylvania, through its president and acting chairman, G. A. Shoemaker, vice-president of the Pittsburgh Consolidation Coal Company.

The convocation was attended by some 600 representatives of industry, the engineering profession and college educators who came from 28 states, Canada and the District of Columbia.

Pre-luncheon talks were delivered by A. C. Montieth, vice-president of the Westinghouse Electric Corporation, S. C. Hollister, Dean of Cornell University, M. H. Trytten of the National Research Council, and C. H. Brown, manager of engineering and manufacturing services of Eastman Kodak Company and chairman, E.M.C.

An open forum in the afternoon was presided over by Mr. Shoemaker. The question and answer session was conducted by the four speakers and Admiral Ben Moreell, president of Jones & Laughlin Steel Corp., former member of the Scientific Manpower Advisory Committee of the National Security Resources Board and organizer of the Seabees; Dr. Douglas Brown, dean of faculty at Princeton University and member of the committee on specialized personnel; and Dr. P. N. Powers, assistant to the president of Monsanto Chemical Company and former secretary of the Scientific Manpower Advisory Committee.

The talks, all strongly stressing the need for public recognition of the lack of engineering manpower, were opened by Mr. Montieth, who said that "the average American layman, in his complacency, does not realize that more progress has been made in technological achievements in the past 50 years than in the previous 500." He pointed out that the public does not understand that to maintain and to advance the national standard of living, more engineers and more scientifically trained men must be available.

Dean Hollister showed on a chart that the 1951 need for engineers comes to 95,000 to satisfy industry and the military. But only 38,000 were graduated from colleges this year. Prospects indicate that total engineering graduates for some years to come will average less than 20,000 a year.

Dr. Trytten stated that there should be a clear understanding of the need for properly trained people at each important station, whether it be at the front or rear and regardless of the type of training that may be necessary. "Similarly," he added, "there needs to be a provision made so that those who serve in one position required by the national interest be not stigmatized in comparison with others who serve in other capacities equally important to the national interest."

The engineering profession itself was called upon by Carey H. Brown to "broadcast" the facts as to the shortage of engineers and to disseminate this information to their own local communities. "If America is to be the arsenal of democracy, we must out-design and out-produce our enemies," he said.

The military establishment was cautioned not to call those in critical engineering positions without due regard for the importance of their present service. Enlisted and officer reservists whose training qualifies them as engineers should be used in assignments only engineers can fill.

Simultaneously, industry was urged to use engineers in jobs in which engineers only are required, and not to hold young engineers in "interne" positions longer than necessary to qualify them. Finally, engineers should be moved to positions of maximum responsibility, and released from positions not requiring engineering training.

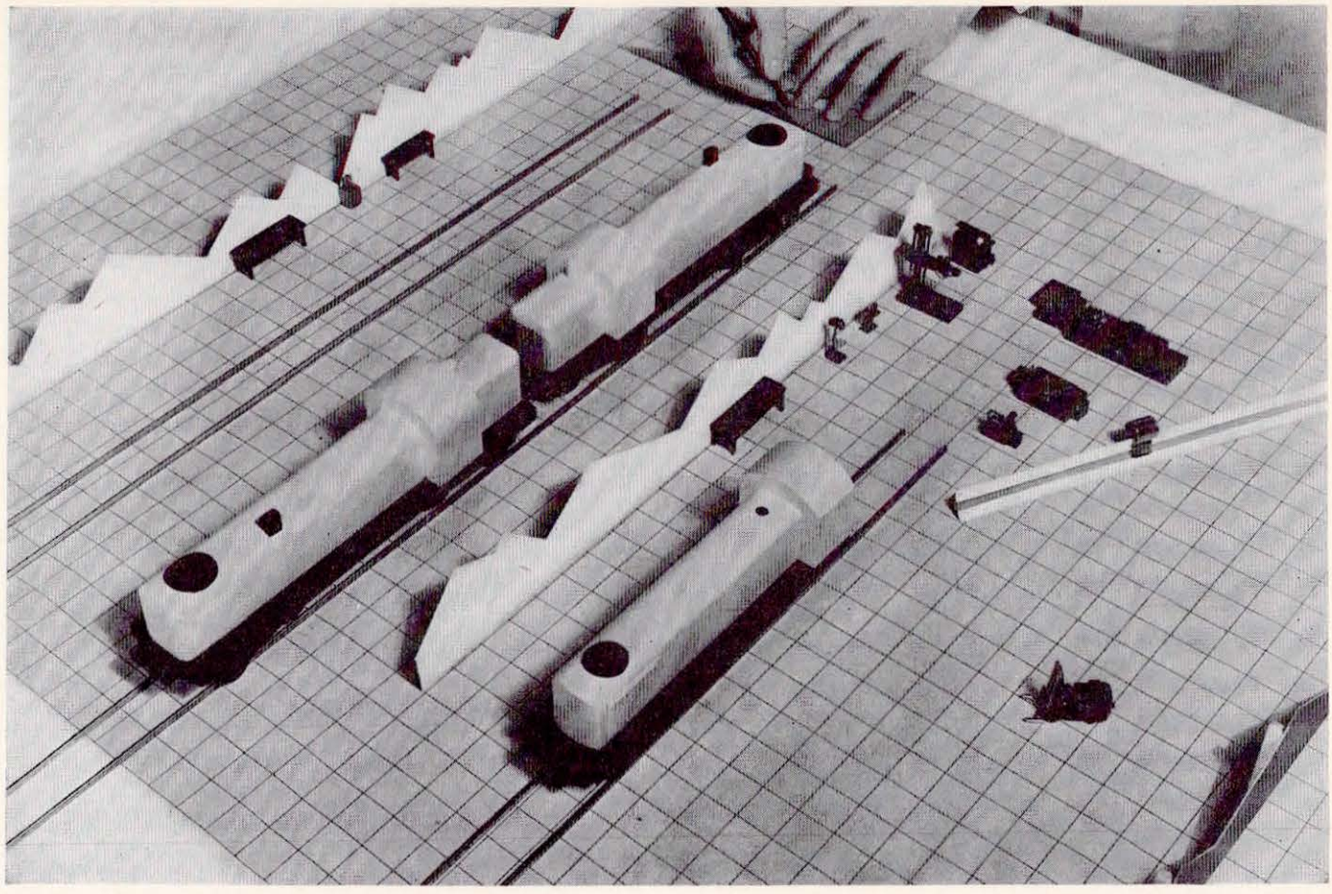


Fig. 1—The first drawing on one-inch squared graph paper should show tracks, pits and openings in existing buildings

Locomotive Maintenance and "Cornfield Layouts"

By N. L. WALSH
Transportation Divisions
General Electric Company
Schenectady, N. Y.

Outline of a method for adapting existing railroad facilities to the needs of diesel-electric locomotive maintenance

What has a cornfield to do with a locomotive?

The cornfield itself is remote, but the "cornfield layout" is very closely linked to providing the most efficient facilities for maintaining diesel-electric locomotives. This is a method of planning whereby models of equipment and machinery to be used are laid out, then shuffled around in order to develop the most practical and efficient means of using actual facilities.

The wealth of experience now available enables the planning of a complete and ideal new maintenance shop, which is very desirable. However, the majority of railroads do not plan to start from the ground up, for only in certain cases is the desired land and capital available. A railroad with existing steam power maintenance facilities will endeavor to use equipment suitable to diesel-electric locomotive maintenance in a new or conversion facilities program. Few, if any, steam power maintenance shops are all that might be desired from a diesel-electric locomotive standpoint. However, careful study on planning will often enable an operator to achieve satisfactory results in conversion at a reasonable cost and the "cornfield layout" serves best to illustrate the changes to be made.

The basic steps to effect a maintenance shop conversion program are:

1. Prepare a sketch of existing buildings on half- or one-inch squared graph paper, using a quarter-inch scale.

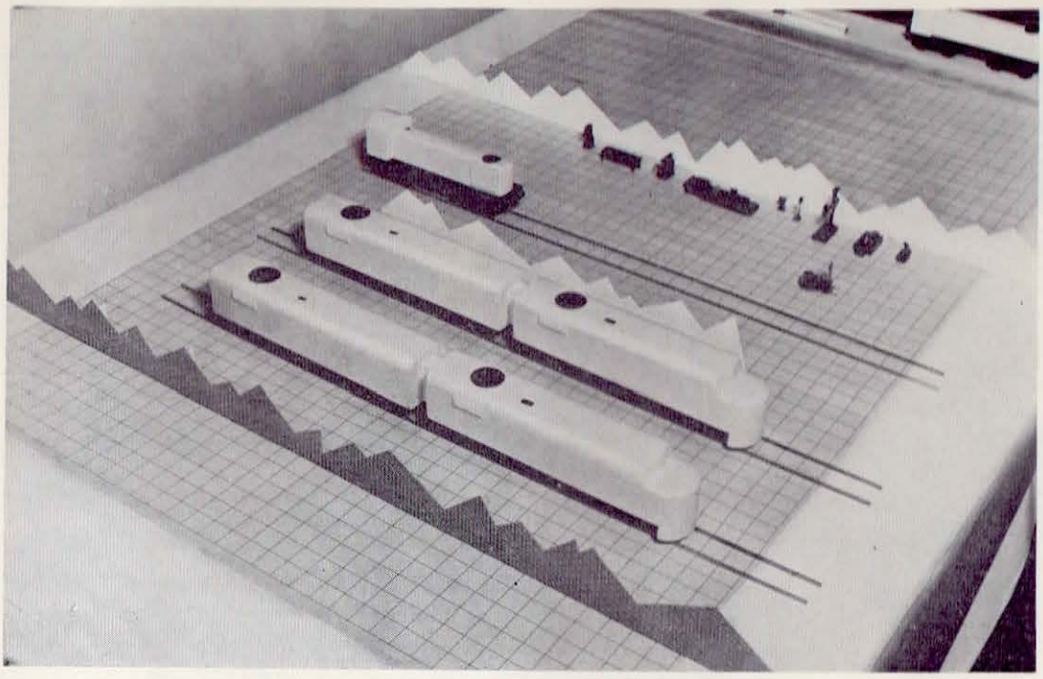


Fig. 2—Model locomotives, work benches, etc., should be used to determine clearances

2. Draw in present track, pits, openings and any permanent features of the building, bearing in mind that these may have to be changed to accomplish the desired result (Fig. 1).

3. Decide which machinery will be retired and which will be utilized. Use quarter-inch scale models of both new and old machinery for determining the location of and space required by actual machines. Model locomotives, work benches, track sections, etc., should also be used to determine clearances (Fig. 2).

4. Draw around models in the layout and record all measurements (Fig. 3).

5. Photograph the layout from various angles.

6. Proceed with the conversion.

This method of planning, long used in industrial plants to achieve optimum effciency, is applicable to railroad maintenance shops, and is practiced by the American Locomotive Company and General Electric Company when planning maintenance facilities.

Necessity and Advantages of Planning

The need for planned maintenance facilities becomes very apparent on examination of the work flow in an ordinary maintenance shop. Units waiting on a shop track for maintenance, or unreasonably delayed in the shop, represent idle capital, which is abhorrent to any railroad officer. Unequal distribution of labor and non-productive man-hours, which are the result of poor maintenance scheduling and inefficient facilities, cannot be condoned under present conditions and labor costs.

Many advantages, such as availability and dependability, normally inherent in diesel-electric locomotives, are nullified because inadequate planning results in mediocre maintenance. The benefits that accrue from planned facilities include the elimination of non-productive man-hours, adequate maintenance, faster turnaround, full utilization of facilities and consequent maximum return on investment.

The need for planning conversion of existing facilities being realized, the factors involved that merit most consideration and which will determine the extent to which conversion is to be made are:

1. *Financial status.*—This is an internal problem of the railroad concerned.

2. *Existing buildings.*—These may be adapted to the maintenance of diesel-electric locomotives, if the expected life and condition of the buildings justifies their use for this purpose. The location of these existing buildings was usually determined by their strategic value in relation to the railroad's operation. It would, therefore, seem logical that since the railroad is currently operating the same track probably with heavier traffic movements, they might still be in the best location, but this needs verifying.

3. *Condition of machines.*—Often existing machinery, such as that normally used in maintaining steam motive power, is not entirely satisfactory for diesel-electric locomotive maintenance. There are obvious advantages in returning a large proportion of such equipment to the original manufacturer for rebuilding. With the easily replaceable sub-assemblies of diesel engines, only a minimum amount of machine work is involved in maintaining this part of the diesel-electric locomotive. Wheel lathes, boring machines, wheel presses, overhead cranes, air brake testing equipment, or any machinery for truck and chassis maintenance, should be retained if condition and life expectancy so warrant.

4. *Motive power.*—The motive power involved should determine the amount of space and the number of tracks that will be used: (a) for regular trip inspections and maintenance; (b) for heavy or more lengthy maintenance; and (c) for complete overhaul and rebuilding.

5. *Scope of repairs.*—A clear-cut picture should be developed to determine the extent of repairs that will be undertaken:

(a) It will probably be more economical to return heavy electrical apparatus to the original manufacturer for major repair rather than to install the expensive equipment and hire the specialized labor required to do this work on the premises. An exception to this would be found where there is a high load factor permitting full utilization of the specialized equipment and per-

sonnel. It is possible to do a considerable amount of minor repairs on the premises without specialized machinery.

(b) Diesel engines used in locomotives lend themselves to repair work without employing too much machinery, although specialized knowledge is required. The unit exchange plan, offered by locomotive manufacturers, eliminates a considerable amount of processing in the maintenance shop and also makes a guaranteed product available for the use of the railroad.

(c) Wheel turning and truck repair work do not present any problems in maintenance that differ from normal steam power repairs.

Approaching the Ideal

In laying out the shop, every effort should be made to utilize the equipment fully and incorporate those facilities that will reduce delays, thereby helping to maintain units efficiently. The maintenance shop is advantageously divided into three sections: (1) Preventive maintenance and inspections, (2) heavy repair, and (3) auxiliary facilities, stores, office, etc.

Through tracks with pits between the rails are desirable for preventive maintenance. Depressed floors on either side of the tracks will make brake rigging and trucks readily accessible and provide the means for efficient maintenance.

Elevated platforms on either side of the running maintenance tracks should be at locomotive platform height to permit rapid access to diesel engine rooms with minimum fatigue to the maintainers. Work benches on these platforms enable light repair work to be completed without removing the defective apparatus to another part of the shop. Superelevated platforms are desirable for work on switcher locomotives with "in-line" type diesel engines.

An overhead crane with a capacity of one ton will facilitate parts handling on the preventive maintenance tracks. Engine exhaust fumes can be eliminated from this section of the maintenance shop by installing ducts fitted with exhaust fans over the engine stacks.

It is desirable to have the section of the shop devoted to heavy maintenance and engine rebuilding served by stub tracks, with the surrounding floor at track level.

Wheel work can best be performed in this heavy repair section. Such an arrangement would lend itself to use of a single overhead crane, with a capacity of approximately 30 tons, in removing diesel engines from a unit, handling trucks, or moving other heavy pieces of equipment.

The machine shop should be near the heavy repair section and situated between the engine rebuilding portion of the building and that part where electrical repairs are undertaken.

Experience has shown that the best location for stores is at the end of the heavy repair section and adjacent to the light maintenance tracks. Consideration should be given in planning the stores to arranging racks for the regularly required spares close to the parts dispensing counter. Heavier and less frequently required spares can be stored in the more distant section of the space allotted. It is desirable to have a proper indexing and record system to keep track of all material on hand in order to tabulate costs chargeable to maintaining any particular pieces of apparatus.

The filter cleaning room may be located alongside the storeroom on the light maintenance section side to minimize movements on the part of maintainers when changing filters.

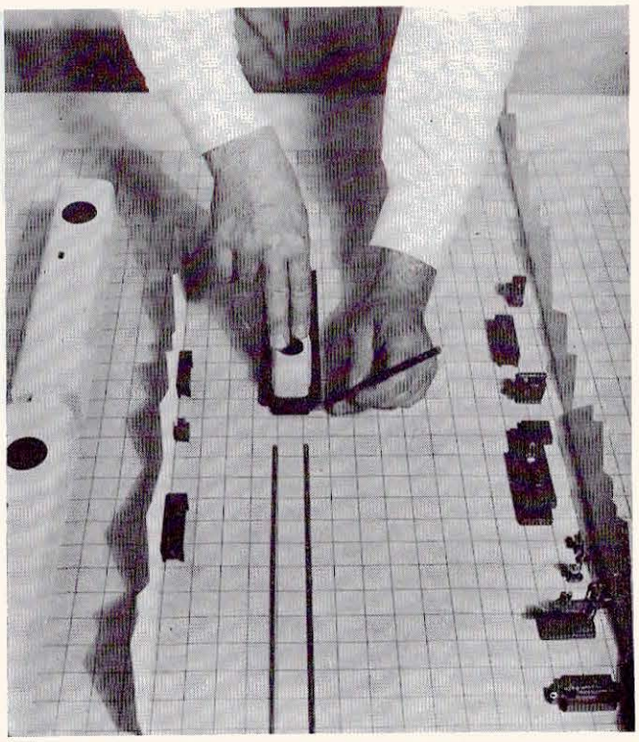


Fig. 3—Outlines of models are traced on the graph paper

It is preferable to provide a separate air brake, fuel injector and pump room. Should the operation of the railroad warrant the purchase of lubricating oil in bulk, proper storage facilities should be provided in the building together with the necessary oil reclaiming equipment.

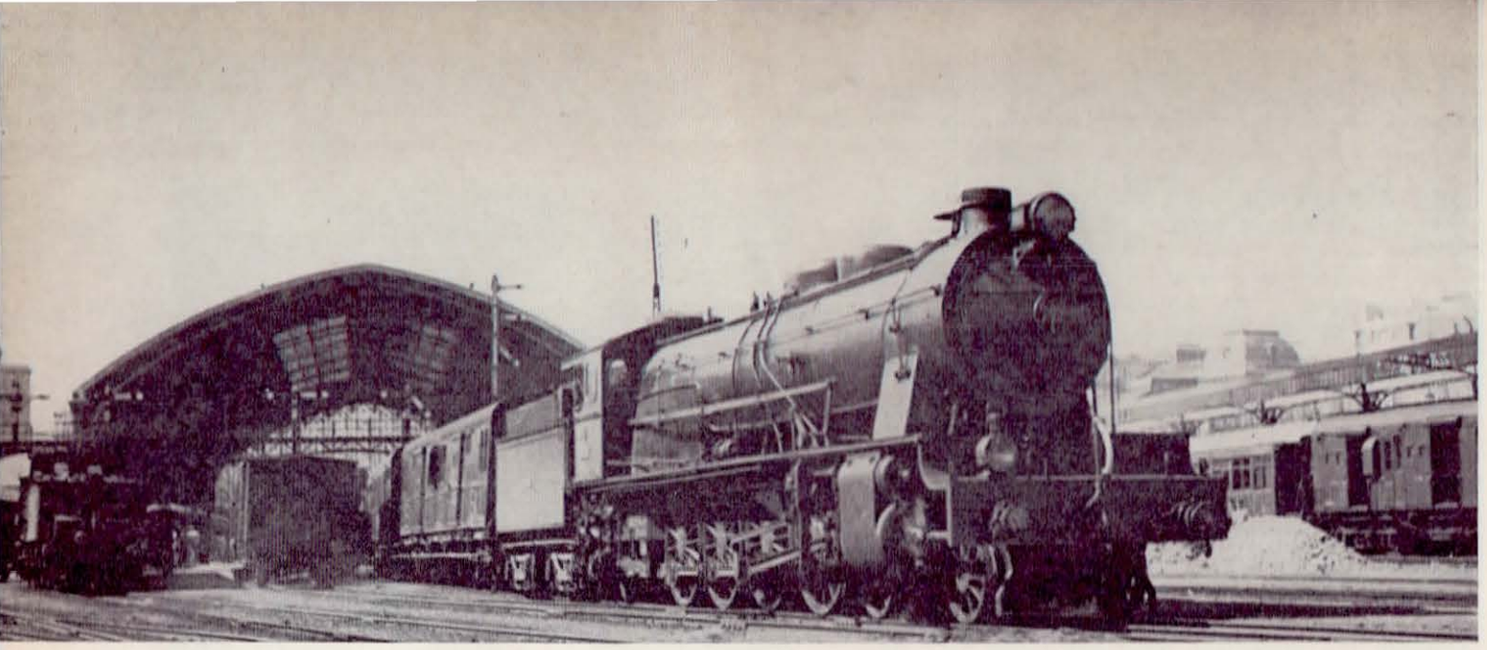
Staff facilities would normally include lunch and locker rooms.

If possible, the whole building should be well illuminated by natural light supplemented by adequate artificial illumination. Interior decoration should be given careful consideration, the color tones being chosen for maximum light reflection and the promotion of a cheerful atmosphere. This will lead to good housekeeping, which is conducive to good maintenance. A color scheme is desirable to identify the different piping arrangements in the building; oil, compressed air, water, etc.

Maintenance Schedules

The advantages of the most efficient installation can be nullified if scheduled maintenance is ignored. Proper schedules for each type of locomotive unit operated should be drawn up according to individual manufacturers' recommendations and adhered to as rigidly as possible. Service that is desirable for one type of unit is not necessarily applicable to another. Any unnecessary maintenance or duplication of work should be avoided. Scheduled maintenance should incorporate a cost accounting system to evaluate labor and material charges against units to determine overall cost of operation.

Since a railroad's income is derived from ton-miles of revenue freight and the maintenance shop's job is to provide the dependable and efficient means of moving tons x miles at minimum cost, shop planning has much to do with operating at a profit.



The "Andalucia Mail" leaving Atocha station, Madrid, on 356-mile run to Seville

New Equipment and Supplies . . .

First Aid for the Spanish Railways

By H. A. McBRIDE

American loan will help rehabilitation of overworked 8,000-mile state-owned system

[Recent announcement* by the Export-Import Bank of Washington, D. C., of a credit of $7½ million to the Spanish National Railways indicates that further progress will be made in the modernization of the run-down railroads forming the system operated by the Spanish government. Reconstruction was begun in 1941, and includes a program for the purchase of some $70 million in new equipment, most of which will be imported. According to the Export-Import Bank, these outside purchases are about two-thirds complete. The $7½ million credit will finance purchase of $1.3 million of rails and accessories, $1.2 million of signaling equipment, and $5 million of locomotives (chiefly electric) and electric substation equipment.—EDITOR]

Spain is a square-shaped country, from which a strip on the west has been hewn to make Portugal. Right in the middle of the square is Madrid, the capital, the nerve center and the hub of the railroad network. From this hub, like spokes of a wheel, radiate all the principal main lines.

First in importance is the 400-mile stretch from Madrid to Irun on the French border. This is the route of the luxurious "Sud Express," which leaves Madrid at 9:35 p.m. and reaches Paris in 26 hours, a run of 906 miles. There is a delay of an hour or so at Hendaye, the French customs station, where there is a change of trains. The Spanish gage is 5 ft. 6 in., whereas the French is standard (4 ft. 8½ in).

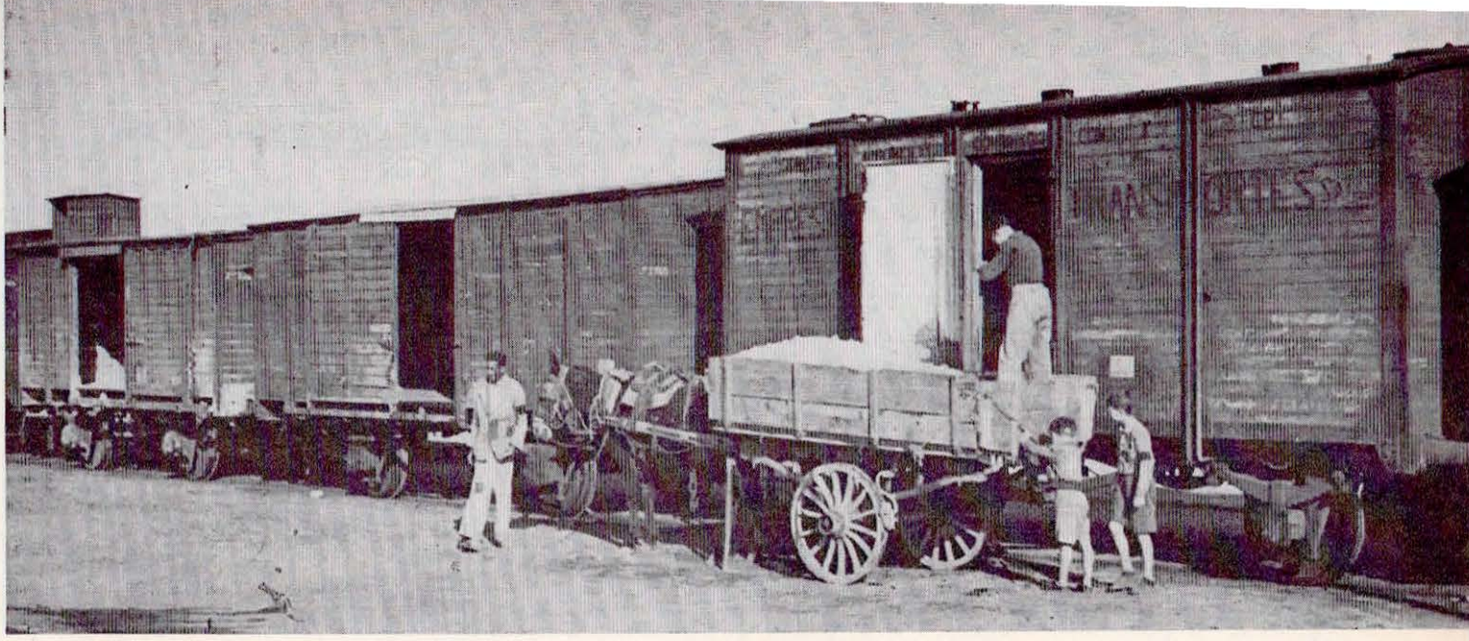
The route next in importance is the 426-mile run between Madrid and Barcelona, Spain's chief manufacturing city. Each has a population of about 800,000. There are four passenger trains each way daily, the most popular being the "Catalan Express," leaving Madrid at 7:00 p.m. and due at Barcelona at 10:00 a.m.

The other spokes of the wheel are of relatively less note. They radiate from Madrid west to Portugal; north to the seaports of Bilbao, Santander, Gijón, and Coruña; east to Valencia and Alicante on the Mediterranean; and south, through Córdoba and Seville, to Cádiz on the Atlantic. There is also a line to Algeciras, opposite Gibraltar, and to Málaga and Almería. The distance to these ports from Madrid varies between 250 and 516 miles.

In addition to these main spokes in the wheel there are various connections; these almost invariably are secondary lines. Exceptions are the long stretch across northern Spain from Irun, through Zaragoza, to Barcelona; and the busy 230-mile line along the beautiful Mediterranean coast connecting Barcelona with the orange groves of Valencia. Another exception, better known to Americans, is the 178-mile line from Seville to Granada, via Bobadilla. This small town is a major railroad junction, where trains from north, south, east and west stop for breakfast, lunch and dinner.

On these southern lines most of the orthodox steam

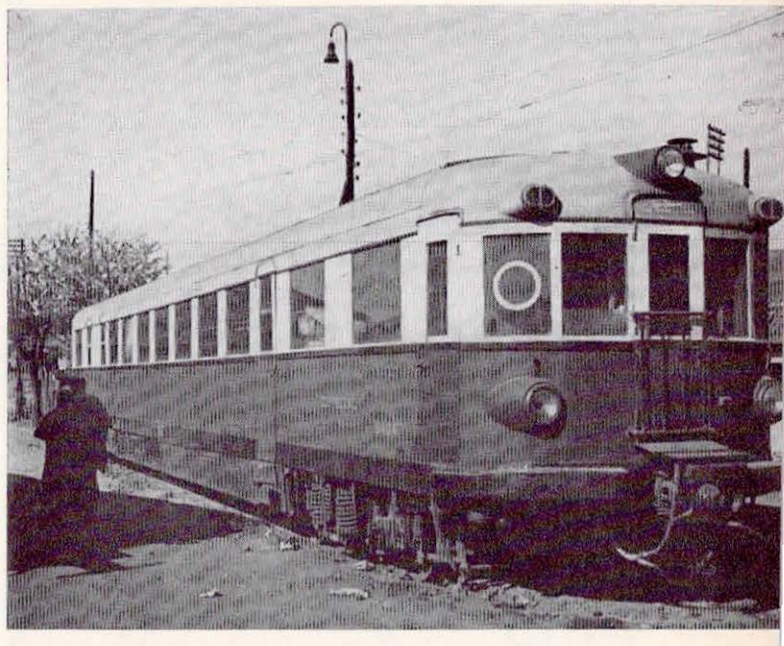
* Reported in *Railway Age* August 20, page 75.



The daily "fish train" for Madrid being iced before departure from Algeciras

trains have been replaced by diesel or gas-electric rail-cars built in Italy, mostly by Fiat. They are comfortable and attractive, and painted blue and white.

None of the trains attains any great speed—too many mountains, curves and grades. Nearly every passenger train is uncomfortably crowded, evidence of need for more trains and more equipment. Spain got a late start in railroad construction. The first real start was made in Barcelona, then (1843) a city of 150,000 people with thriving manufactures. A shipowner, Miguel Biada, who had traveled extensively and was greatly impressed with the railroads in the United States, formed a company and obtained a concession to build from Barcelona to Mataró, 18 miles. The contract was let to a British firm: work started shortly thereafter, with no great difficulties other than a 500-foot tunnel and one bridge over a small river. Four locomotives were brought from Potts and Jones in England, together with 62 passenger and 34 freight cars. With intense excitement the line was opened in October 1848. This first line in Spain was built with private capital and did not encounter the vexatious delays suffered by later projects which were dependent upon government financing.



Recently acquired equipment includes diesel-powered rail cars

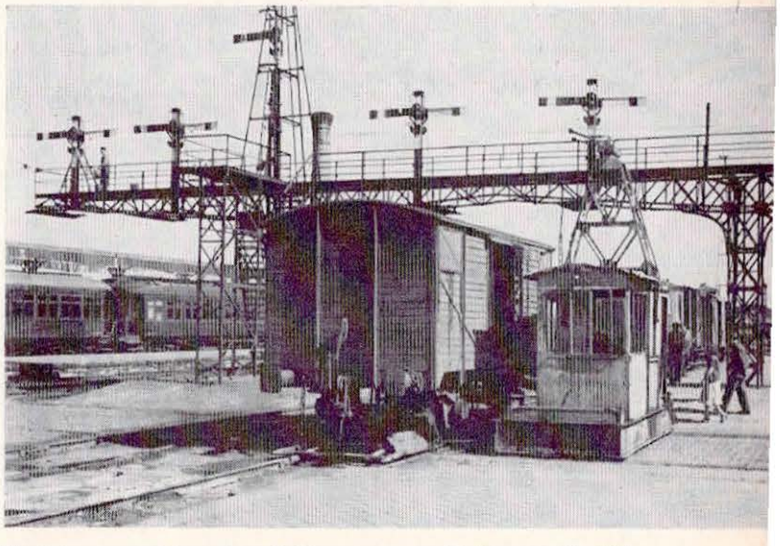
Weird Regulations

After several years' delay, and with government aid, Spain's second line was built from Madrid 31 miles south to Aranjuez, the summer residence of the royal family. Started in 1844, this second railroad in Spain was opened to traffic in February 1851.

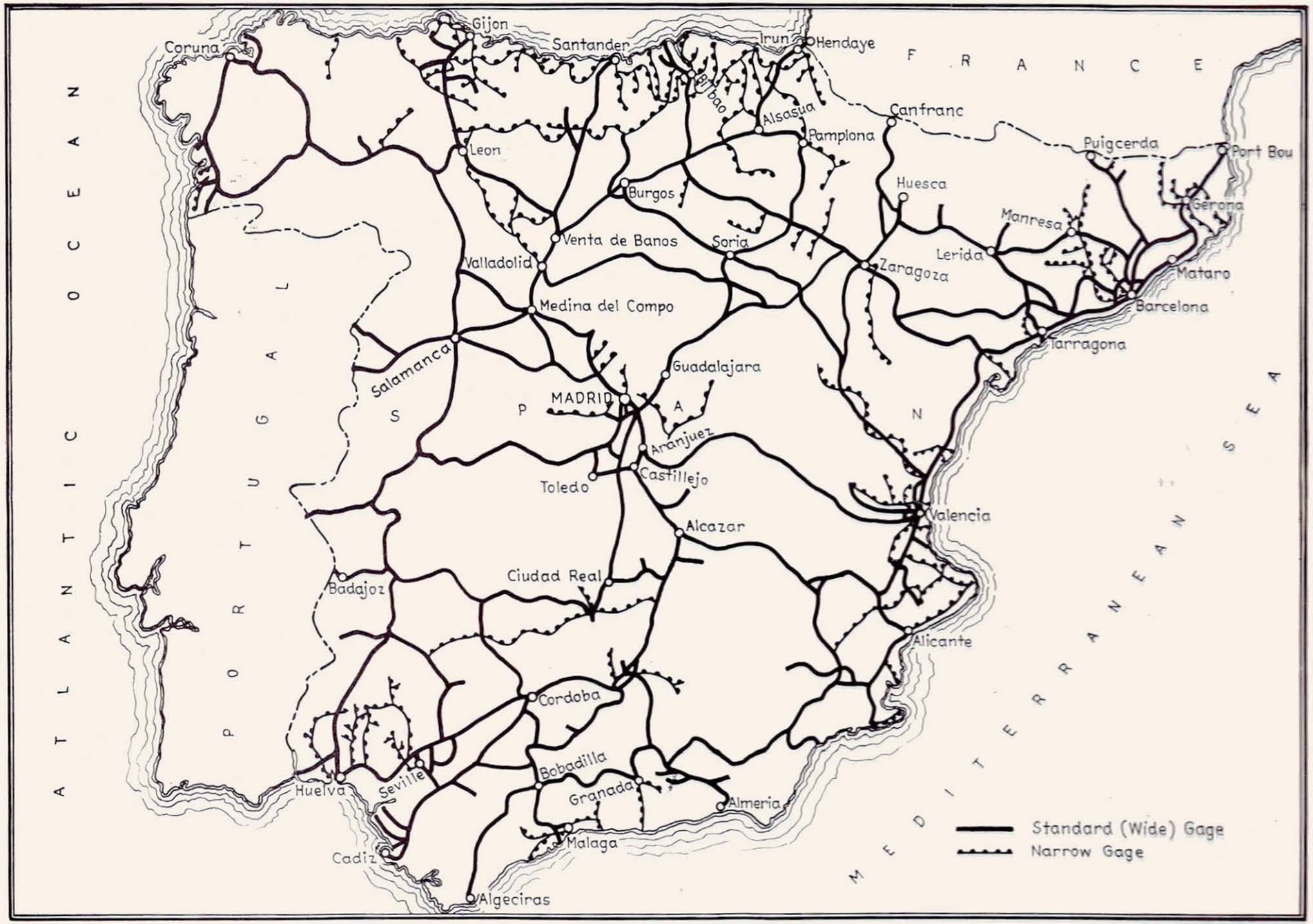
Many were the weird regulations promulgated by the early railroads. Here's one translated literally from the first rules of the Madrid-Aranjuez line: "If, unfortunately, in a moment of fear or apprehension, passengers should jump out of the carriage window while the train is in motion, they should at least jump with all their force so as not to land under the carriage or on the rails."

This late start in Spain was followed by great activity in railroad building, especially from 1880 to 1910. Small roads were pieced together, nearly always connecting Madrid with the seaports. On all these lines rugged mountains were encountered that meant heavy grades, many tunnels, sharp curves.

Since the original roadbeds were surveyed, the country has never had either sufficient wealth or traffic to



Electric-powered transfer platforms save switching at Madrid


ATLANTIC OCEAN
PORTUGAL
SPAIN
FRANCE
MEDITERRANEAN SEA
Coruna
Gijon
Santander
Irun
Hendaye
Bilbao
Alsasua
Canfranc
Pamplona
Puigcerda
Port Bou
Leon
Burgos
Huesca
Gerona
Manresa
Venta de Banos
Soria
Valladolid
Lerida
Zaragoza
Mataro
Medina del Compo
Barcelona
Salamanca
Tarragona
Guadalajara
MADRID
Aranjuez
Castillejo
Toledo
Valencia
Alcazar
Badajoz
Ciudad Real
Alicante
Cordoba
Bobadilla
Huelva
Seville
Granada
Almeria
Malaga
Cadiz
Algeciras
Standard (Wide) Gage
Narrow Gage

The station, yards and enginehouse at Cadiz are typical of Spanish railroad facilities

bear the tremendous costs of straightening lines or easing grades. This is what has been retarding any great railroad modernization in Spain.

From 1936 to 1939 came the Spanish civil war, in which were destroyed many bridges and tunnels and about one-third of the locomotives and rolling stock. Private capital could not be found to undertake renovation and modernization.

In 1941 the government assumed ownership of all the main lines and a few of the lesser lines. The "Red Nacional de los Ferrocarriles Españoles" ("Red" means network—nothing to do with Russia!) was formed and now operates under the Ministry of Public Works. It is known as RENFE and this lettering appears on motive power and rolling stock. RENFE now runs the whole main system of Spain, comprising about 8,000 miles of railroad, with 1,096 miles of double track and 2,000 miles of sidings. There are 1,415 bridges and 795 tunnels. This is in a country about twice the size of Colorado, with a population of some 28 million.

Narrow-Gage Lines

The state also owns some 500 miles of narrow-gage lines. In addition, Spain has 75 small narrow-gage railways privately owned and mostly industrial in character. They have a total length of nearly 3,000 miles. Electrification has not gone very far, but in the north, where hydroelectric power is available, some 400 miles of electrified railroad are in operation.

RENFE has 2,701 steam locomotives of all sizes and ages. Maintenance on the motive power is excellent and there are many engines doing their daily job that were built in England, Belgium and Germany forty and more years ago. Many of the larger engines are 4-8-2's and 2-8-2's.

There is urgent need for at least 200 new locomotives, especially to maintain such services as the daily fish train, in one or two sections, which makes the 460-mile run from Algeciras to the capital. These fish trains leave various ports every night to help feed the people in Madrid and other cities in mid-Spain. The small 12- and 20-ton freight cars are iced by hand on sidings that run out on the fish piers.

Not only fish, but most other food stuffs have high priority on Spanish railroads. In order to distribute the carefully rationed food supplies of the country, these trains have a right-of-way similar to our own hotshot freights. For products not on the priority lists, however, the freight service is slow and uncertain because of the lack of sufficient rolling stock. Ordinary shipments between the great centers of Madrid and Barcelona sometimes take three or four weeks.

RENFE operates 67,251 freight cars, of which 36,000 are box cars. The majority are the 12- and 20-ton four-wheel cars. The authorities say that several thousand new freight cars are needed desperately. In a recent year RENFE received only 116 new freight cars and was obliged to scrap 886. Nevertheless, the system is hauling more freight than ever, the annual amount now being about 25 million tons. This is 90 per cent of all the freight carried by rail in Spain.

Passenger service is hampered in a similar manner. RENFE has 2,736 passenger and 1,811 baggage cars. Many are of old design and construction and should be replaced. Passenger trains run at about 25 m.p.h. with the de luxe expresses averaging about 32. These speeds, however, could not be greatly increased even with new rolling stock and modern motive power, because of the steep grades and the narrow curves.

In order to alleviate these formidable difficulties to some extent, RENFE has, in the past few years, added 78 electric locomotives and 126 gas-electric and diesel rail-cars to its roster. The system now carries nearly 120 million passengers a year and has about 125,000 people on its payrolls.

Manufacture of railway equipment in Spain is now largely confined to the Bilbao area. Four or five firms are involved, the most important being the Euskalduna company, a large ship-building concern which entered the railroad field in 1924. The total production, however, falls far short of the country's needs. In a recent year, for instance, these firms supplied some 20,000 tons of rail and built 50 locomotives and 775 passenger and freight cars. Their most noteworthy achievement seems to be the successful manufacture of motor rail-cars and electric locomotives. In addition to the building operations, they repair a large amount of rolling stock.

RENFE's principal enginehouses and shops for major repairs on locomotives are situated at Madrid, Barcelona, Valladolid and Málaga. These shops also work on passenger and freight rolling stock. The large freight classification yards are "Las Rozas" (Madrid) and at Venta de Banos, Alcázar, Barcelona, Seville and Córdoba. The most important passenger terminals are, of course, at Madrid and Barcelona. Madrid has two famous stations, the Norte for northern Spain and France, and the Atocha for the east, west and south.

Atocha is a fairly modern station which has grown from the little covered platform from which Madrid's first train set forth in 1851. Here one sees passenger trains with first, second and third class coaches, diners and through Wagon-Lits sleepers.

There is always a good head-end business with four or five express and mail cars. On another track, a shorter local will arrive, perhaps from Toledo, and one of the blue and white rail-cars will whiz away for Guadalajara.

The American-built Talgo train was on the Burgos run from Norte station for a while and recently made an official trial trip west to Lisbon.

Railroad Purchases Reach $2,065,770,000 in Seven Months

Purchases by domestic railroads of all types of materials during the current year's first seven months totaled $2,065,770,000, an increase of $584,118,000, or slightly more than 39.4 per cent, over the $1,481,652,000 of purchases in the comparable period of 1950. In the first seven months of 1951, commitments for purchase of rolling stock aggregated $709,163,000, an increase of $164,654,000 over similar commitments in the first seven months last year. Purchases in all other categories also were higher in the first seven months of 1951 than in the equivalent 1950 period.

July purchases totaled $209,324,000, which included $22,326,000 in equipment commitments to buy 2,417 freight-train cars and 49 diesel-electric locomotive units.

1951 RAILWAY PURCHASES*

	July (000)	Seven Months Totals 1951 (000)	Seven Months Totals 1950 (000)
Equipment**	$22,326	$709,163	$544,509
Rail	9,339	58,511	58,506
Crossties	9,624	53,095	31,891
Other Material	123,848	880,024	514,881
Total from Manufacturers	$165,137	$1,700,793	$1,149,787
Fuel	44,187	364,977	331,865
Grand Total	$209,324	$2,065,770	$1,481,652

*Subject to revision
**Amount placed on order

JULY* PURCHASES OF MANUFACTURED GOODS (Excl. Equip. & Fuel)

Year	July '51 Compared to Other Julys (000) Amt.	% Change	Month	July '51 Compared to Other Months '51 (000) Amt.	% Change	Year	Seven Months Totals '51 And Other Years (000) Amt.	% Change
1945	$ 83,978	+ 70	Jan.	$132,392	+ 8	1945	$570,668	+ 74
1946	82,185	+ 74	Feb.	123,177	+ 16	1946	540,509	+ 83
1947	105,869	+ 35	Mar.	147,053	— 3	1947	711,263	+ 39
1948	110,457	+ 29	Apr.	150,763	— 5	1948	760,456	+ 30
1949	91,906	+ 55	May	151,542	— 6	1949	730,767	+ 36
1950	91,782	+ 56	June	143,892	— 1	1950	605,278	+ 64
1951	142,811		July	142,811		1951	991,630	

JULY* PURCHASES OF RAIL

Year	July '51 Compared to Other Julys (000) Amt.	% Change	Month	July '51 Compared to Other Months '51 (000) Amt.	% Change	Year	Seven Months Totals '51 And Other Years (000) Amt.	% Change
1945	$ 6,989	+ 34	Jan.	$ 7,682	+ 22	1945	$ 42,648	+ 37
1946	5,670	+ 65	Feb.	7,246	+ 29	1946	29,866	+ 96
1947	8,024	+ 16	Mar.	8,072	+ 16	1947	49,683	+ 18
1948	7,143	+ 31	Apr.	8,054	+ 16	1948	52,186	+ 12
1949	11,021	— 15	May	9,013	+ 4	1949	68,259	— 14
1950	9,884	— 6	June	9,105	+ 3	1950	58,506	——
1951	9,339		July	9,339		1951	58,511	

JULY* PURCHASES OF CROSSTIES

Year	July '51 Compared to Other Julys (000) Amt.	% Change	Month	July '51 Compared to Other Months '51 (000) Amt.	% Change	Year	Seven Months Totals '51 And Other Years (000) Amt.	% Change
1945	$ 5,778	+ 67	Jan.	$ 6,495	+ 48	1945	$ 40,647	+ 31
1946	7,851	+ 23	Feb.	5,371	+ 79	1946	50,428	+ 5
1947	8,535	+ 13	Mar.	7,158	+ 34	1947	57,092	— 7
1948	7,621	+ 26	Apr.	7,213	+ 33	1948	42,869	+ 24
1949	7,239	+ 33	May	8,596	+ 12	1949	53,013	——
1950	4,233	+127	June	8,638	+ 11	1950	31,891	+ 66
1951	9,624		July	9,624		1951	53,095	

JULY* PURCHASES OF OTHER MATERIAL

Year	July '51 Compared to Other Julys (000) Amt.	% Change	Month	July '51 Compared to Other Months '51 (000) Amt.	% Change	Year	Seven Months Totals '51 And Other Years (000) Amt.	% Change
1945	$ 71,211	+ 74	Jan.	$118,215	+ 5	1945	$487,373	+ 81
1946	68,664	+ 80	Feb.	110,560	+ 12	1946	460,215	+ 91
1947	89,310	+ 39	Mar.	131,823	— 6	1947	604,488	+ 46
1948	95,693	+ 29	Apr.	135,496	— 9	1948	665,401	+ 32
1949	73,646	+ 68	May	133,933	— 8	1949	609,495	+ 44
1950	77,665	+ 59	June	126,149	— 2	1950	514,881	+ 71
1951	123,848		July	123,848		1951	880,024	

*Subject to revision.

JULY* PURCHASES OF FUEL

Year	July '51 Compared to Other Julys (000) Amt.	% Change
1945	$ 47,049	— 6
1946	50,270	— 12
1947	49,404	— 11
1948	68,011	— 35
1949	37,104	+ 19
1950	42,971	+ 3
1951	44,187	

Month	July '51 Compared to Other Months '51 (000) Amt.	% Change
Jan.	$ 62,240	— 29
Feb.	51,592	— 14
Mar.	57,053	— 23
Apr.	52,532	— 16
May	48,522	— 9
June	48,851	— 10
July	44,187	

Year	Seven Months Totals '51 And Other Years (000) Amt.	% Change
1945	$329,216	+ 11
1946	305,349	+ 20
1947	379,260	— 4
1948	486,149	— 25
1949	366,529	— 1
1950	331,865	+ 10
1951	364,977	

JULY* TOTAL PURCHASES (Excl. Equip.)

Year	July '51 Compared to Other Julys (000) Amt.	% Change
1945	$131,027	+ 43
1946	132,455	+ 41
1947	155,273	+ 20
1948	178,468	+ 5
1949	129,010	+ 45
1950	134,753	+ 39
1951	186,998	

Month	July '51 Compared to Other Months '51 (000) Amt.	% Change
Jan.	$194,632	— 4
Feb.	174,769	+ 7
Mar.	204,106	— 8
Apr.	203,295	— 8
May	200,064	— 7
June	192,743	— 3
July	186,998	

Year	Seven Months Totals '51 And Other Years (000) Amt.	% Change
1945	$899,884	+ 51
1946	845,858	+ 60
1947	1,090,523	+ 24
1948	1,246,605	+ 9
1949	1,097,296	+ 24
1950	937,143	+ 45
1951	1,356,607	

JULY* INVENTORIES OF RAIL

Year	July '51 Compared to Other Julys (000) Amt.	% Change
July 1, 1945	$25,213	+ 50
1946	22,716	+ 66
1947	26,536	+ 43
1948	30,837	+ 23
1949	36,486	+ 4
1950	37,542	+ 1
1951	37,821	

Month	July '51 Compared to Other Months '51 (000) Amt.	% Change
Jan. 1	$38,278	— 1
Feb. 1	40,702	— 7
Mar. 1	43,757	— 14
Apr. 1	41,880	— 10
May 1	42,416	— 11
June 1	41,246	— 8
July 1	37,821	

JULY* INVENTORIES OF SCRAP

Year	July '51 Compared to Other Julys (000) Amt.	% Change
July 1, 1945	$ 9,494	+ 92
1946	11,036	+ 65
1947	9,239	+ 97
1948	14,210	+ 28
1949	16,535	+ 10
1950	13,045	+ 40
1951	18,221	

Month	July '51 Compared to Other Months '51 (000) Amt.	% Change
Jan. 1	$18,260	——
Feb. 1	20,238	— 10
Mar. 1	19,887	— 8
Apr. 1	18,775	— 3
May 1	18,101	+ 1
June 1	18,390	— 1
July 1	18,211	

JULY* INVENTORIES OF CROSSTIES

Year	July '51 Compared to Other Julys (000) Amt.	% Change
July 1, 1945	67,450	+ 34
1946	76,000	+ 19
1947	88,686	+ 2
1948	82,143	+ 10
1949	96,167	— 6
1950	90,779	——
1951	90,524	

Month	July '51 Compared to Other Months '51 (000) Amt.	% Change
Jan. 1	$83,804	+ 8
Feb. 1	88,036	+ 3
Mar. 1	91,400	— 1
Apr. 1	87,624	+ 3
May 1	92,275	— 2
June 1	89,287	+ 1
July 1	90,524	

JULY* INVENTORIES OF FUEL

Year	July '51 Compared to Other Julys (000) Amt.	% Change
July 1, 1945	$53,708	+ 19
1946	44,691	+ 43
1947	56,565	+ 13
1948	83,946	— 24
1949	81,567	— 22
1950	49,112	+ 30
1951	63,944	

Month	July '51 Compared to Other Months '51 (000) Amt.	% Change
Jan. 1	$58,612	+ 9
Feb. 1	59,407	+ 9
Mar. 1	63,351	+ 1
Apr. 1	62,299	+ 3
May 1	63,267	+ 1
June 1	62,405	+ 2
July 1	63,944	

JULY* INVENTORIES OF OTHER MATERIAL

Year	July '51 Compared to Other Julys (000) Amt.	% Change
July 1, 1945	$450,773	+ 49
1946	456,505	+ 47
1947	553,228	+ 21
1948	610,025	+ 10
1949	623,281	+ 7
1950	520,334	+ 29
1951	669,550	

Month	July '51 Compared to Other Months '51 (000) Amt.	% Change
Jan. 1	$526,865	+ 27
Feb. 1	549,054	+ 22
Mar. 1	567,592	+ 18
Apr. 1	603,574	+ 11
May 1	624,097	+ 7
June 1	649,055	+ 3
July 1	669,550	

JULY* TOTAL INVENTORIES†

Year	July '51 Compared to Other Julys (000) Amt.	% Change
July 1, 1945	$606,638	+ 45
1946	610,948	+ 44
1947	734,254	+ 20
1948	821,161	+ 7
1949	854,036	+ 3
1950	710,812	+ 24
1951	880,060	

Month	July '51 Compared to Other Months '51 (000) Amt.	% Change
Jan. 1	$725,819	+ 21
Feb. 1	757,437	+ 16
Mar. 1	785,987	+ 12
Apr. 1	814,152	+ 8
May 1	840,156	+ 5
June 1	860,383	+ 2
July 1	880,060	

*Subject to revision.

†All total inventory figures taken from I.C.C. statement M-125 for the month indicated.

"Most everything these days costs more than it did before World War II — and a lot of things cost more than they did even two years ago. . .

"Because so many of these things are hauled by rail, the question might be asked, 'What have railroad rates had to do with rising prices?' Of course railroad rates have gone up — but they did not start to go up until long after most other prices had risen substantially; they have gone up far less, on the average, than prices generally; and today, they represent an even smaller fraction of prices than they did before World War II started.

"As a matter of fact, the railroads themselves have had the same sort of cost-of-living problem — for in the years since 1939 the wages and prices which they must pay to carry on operations — and to provide the new cars and locomotives, and the expanded facilities necessary to meet the needs of the nation — have increased more than twice as much, in percentage, as the prices at which they sell their transportation services.

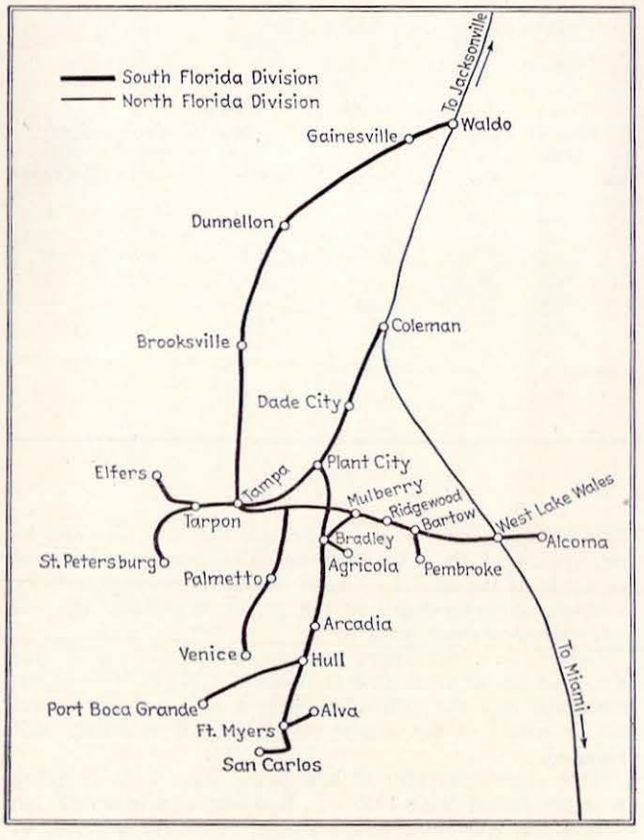
"Indeed . . . the prices and wages railroads must pay have gone up so much that to produce this year's transportation will cost the railroads nearly a billion dollars more than it would if the wages and prices of mid-1949 still prevailed.

"This gives some idea of how prices have kept on going up in the period since 1949 . . . It shows another thing, too — that increases in railroad freight rates are a *result* of inflation — and not a *cause*." — *The Railroad Hour.*

The last of the steam locomotives leave the South Florida division of the Seaboard as it becomes completely dieselized

DIESELS Down in Dixie

Seaboard Air Line builds up a large fleet of motive-power units to increase flexibility of operation and speed of service



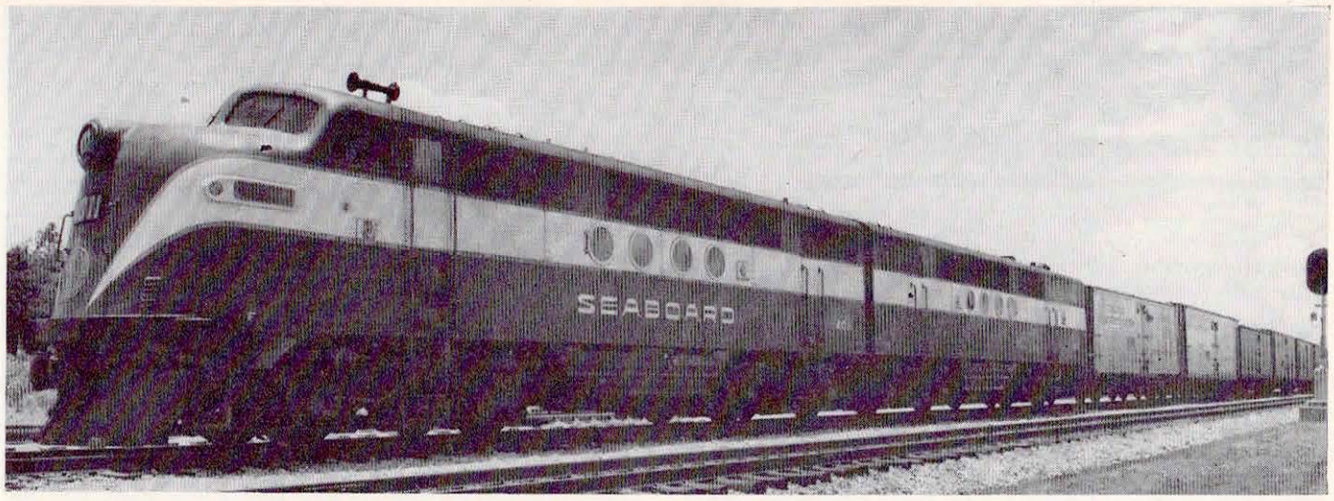
For some years, the Seaboard Air Line has been conducting an aggressive and successful campaign for locating industries along its lines. Service has been one of the inducements offered prospects, and one of the prime implements in achieving this has been the Seaboard's steadily increasing fleet of Diesels. This railway now has a fleet of 395 diesel units. This modern power has also rendered valuable service in meeting demands made on the Seaboard by the preparedness program.

Of the six operating divisions of the Seaboard, the South Florida division has been completely dieselized; all trains on the North Florida division also are operated with diesels, except during the height of the winter tourist and perishable-shipping season; the Alabama division is entirely dieselized, except for a short distance on its east end, between Vidalia and Savannah. The three northern divisions (the Virginia, Carolina and Georgia) have numerous diesel units operating over them.

Except during the height of the winter tourist season, all Seaboard passenger trains are operated with diesels. The first diesels on the Seaboard were those on the streamlined "Silver Meteor." Since that time, the passenger diesel fleet has grown to the present 63 units, of which 60 are of 2,000 hp. and 3 of 1,000 hp. All are assigned on an interdivisional basis.

The road freight diesels are also assigned on an interdivisional basis. The units of 3,000 hp. and 1,500 hp. are used principally in hauling the fast trains of perishables from Florida to northern destinations. By far the largest segment of diesel ownership of the Seaboard consists of road-switchers (1,500 and 1,600 hp.). There are 192 of these in operation. All except three of the 65 yard-switchers that make up the rest of the fleet are of 1,000 hp.

The South Florida division, which includes trackage south and west of Waldo, Coleman, and Alcoma, all in Florida, has 637 miles of line. It has been completely dieselized since June 3, 1950, when the last of the road-switchers was delivered. Since this division is in southwestern Florida, there is no overhead traffic. The bulk of the originated traffic consists of phosphate rock, lime rock, cement, forest products, citrus fruit and vegetables, loaded at numerous locations and assembled into northbound trains at Tampa or Plant City. Exceptions are the train load movements confined entirely to the



Seaboard diesels pile up a large percentage of utilization as operating methods are adjusted to their flexibility

division, consisting of phosphate rock for coastwise or export shipment, handled from the mines to the elevators at Tampa and Port Boca Grande, and clay and limestone from quarries to a large cement plant at Tampa. The road-switchers are ideally adapted both to the geography and the traffic of the division.

The South Florida division comprises a variety of lines. It has the southernmost segment (Coleman to Tampa, 79 miles) of the Seaboard's main line between Richmond, Va., and Tampa. This section is coordinated with the North Florida division for through operations in that both North and South Florida division crews operate through between Jacksonville and Tampa under joint seniority. The division also has a long line in western Florida, extending from Waldo through Gainesville to Sulphur Springs, 148 miles, which produces phosphate rock, lime rock, clay, forest products and some citrus and vegetables. An east-west line between Valrico and Alcoma, 52 miles, with numerous branches, serves the phosphate rock mines and processing plants that have been built close to the mines in recent years. It also serves several large citrus canning, processing and packing plants. The subdivision between Plant City and San Carlos, 118 miles, also serves phosphate and citrus territory. The line to the phosphate elevator at Port Boca Grande leads off this subdivision at Hull; it is 39 miles long.

Tampa Bay is encircled by a line from Tampa to St. Petersburg, 55 miles; the Elfers branch extends for 23 miles from the "St. Pete" line, and still another line between Durant and Venice, via Sarasota, 70 miles, completes the division. The last three lines serve numerous citrus plants and there is a large chemical plant on the Elfers branch as well.

With the complete dieselization of the South Florida division, changes have been made in operating methods to take advantage of the new tool in promoting efficiency. On the main line through passenger and freight trains are operated with diesels having long runs. The 3,000 hp. freight locomotives operate through between Tampa and Jacksonville and are assigned from a pool for operation south and west from Jacksonville. The rating between Coleman and Tampa for steam engines was 3,500 tons—now two of the 3,000 hp. diesels take trains of 10,000 tons, sometimes more, of phosphate north over this line.

Only local service is operated on the Waldo line but connections are made with the main line for fast service to and from the Gainesville area. On this line, the diesels are operated through between Tampa and Waldo, making a daily round trip of 314 miles. Instead of laying over at Waldo overnight, these units make turn-around runs on the North Florida division of either a round trip between Waldo and Ocala (180 miles) or between Waldo and Baldwin (150 miles).

Mulberry, between Tampa and West Lake Wales, is the center of the phosphate rock mining industry. At Ridgewood, between Mulberry and Bartow, a summit is crossed requiring a grade of 0.7 per cent in each direction. One of the road-switchers can handle 3,200 tons over this hill, as against 4,000 tons elsewhere on this line. To avoid cutting tonnage, an additional road-switcher cuts into the eastbound trains at Mulberry, assists them over the hill to Bartow, and returns as a helper on a west-bound train. During the time when it is not on the road, this diesel performs switching service at Mulberry.

Diesel passenger units are also operated in the same flexible manner to obtain the greatest mileage. The unit that brings in train No. 7 from the north makes a round trip of 174 miles on a passenger train between Tampa and Venice, then takes No. 8 north. Train No. 1 arrives at Tampa with two diesel units. One of these continues to St. Petersburg with No. 1, after the Tampa sleepers and some of the head-end equipment have been cut off, and returns to Tampa with No. 2. Meanwhile, the other unit makes a 245-mile round trip to Boca Grande with a passenger train, returning in time to consolidate with the first unit to take No. 2 north.

The large coaling station at Tampa has been dismantled, as well as smaller coaling facilities at other points. Because the phosphate mines are scattered, several branch lines had to be built to serve them. One of these branches recently had to be moved approximately a mile to the west of its original location when it was discovered that it had been built over a particularly rich phosphate deposit. This heavy, short-run traffic formerly required a great deal of hand-coaling of locomotives under steam operation and this expensive and time-consuming process has now been eliminated entirely. Several watering facilities at scattered points have also been eliminated, with attendant savings.

Letters from our Readers . . .

Complimenting Our Bill Schmidt

MICHIGAN CITY, IND.

TO THE EDITOR:

On September 13, 1951, William H. Schmidt, western editor of *Railway Age*, spoke before our club, which is comprised of people who are working in different phases of transportation and shipping in northern Indiana and southern Michigan. His talk on "Socialized Transportation Compared to Free Enterprise" was splendid and was so well received by our organization that our program committee recommended that in addition to thanking Mr. Schmidt, that I write to *Railway Age* telling you of his exceptional ability in presenting transportation information and thanking you and Mr. Schmidt in behalf of all those who enjoyed his talk and information so much. Thanks to *Railway Age* for a speaker so abundant in information, humor and speaking ability.

FRANK R. HYER
President, Michiana Traffic Club

"Spontaneous" Employee Study Group on B. & O.

CHICAGO

TO THE EDITOR:

In your editorial "Keeping People Apace with Improvements in Machines," in the June 11 *Railway Age*, I was particularly impressed with the statement about an educational program ". . . of spontaneous origin among employees themselves — with no assistance by the management, and with no motive whatever except professional pride and the desire to excel."

Here in Chicago, Baltimore & Ohio and Baltimore & Ohio Chicago Terminal railroad employees have had an educational program in effect for almost five years. A group of employees who realized the advantages to be gained through group study of supervisory practices and procedures voluntarily met in August 1946 and formulated plans for this program.

The first formal meeting was held on September 16, 1946, in a room provided by the management. At that meeting, officers comprising president, vice-president, secretary, treasurer and librarian were elected by majority vote and by-laws were drawn up. The term of officers is one year. Meetings are held in the evening, on the second Monday of each month, open to all employees, with buffet supper served free at 5:15 p.m. and business meeting following at 6 p.m. The average attendance at these meetings is 40. There has been continuous interest in the activities, now in their fifth year.

The organization is known as the Administration — Personnel — Management Study Group; it operates with the approval and encouragement of the management, but is entirely self-sustaining. There are no dues or charges. A fund-raising campaign by the membership every two years finances refreshment expenses.

A mimeographed notice is mailed out to all points on the property in Chicago about ten days prior to the meeting date, setting forth the speaker and the topic.

After the usual routine of reading minutes, the treasurer's report and correspondence has been concluded, the guest speaker is introduced. During the group's existence, speakers have represented all departments and occupations. In most cases, they have devoted their comments to operation, to individual functions as employees or supervisors in their respective departments, and to management relations with employees and office procedures. Each talk, is succeeded by a question-and-answer session, which usually brings out additional pertinent information.

We have had clerks and supervision — all the way to the top officer — from every department address the group to give an insight on the activities and problems of the "little fellow" and the "big boss." This has brought about a better understanding in the respective departments, as well as broadened the knowledge of employees in one department about the functions of another. This has created a more cooperative spirit and has brought home forcibly the fact that, to be successful, all departments on the railroad must operate as a unit.

The employees of the B.&O. in Chicago take pride in their organization and all who attend will attest that the knowledge gained by their attendance would be most difficult to gain by other means. Our activity has received considerable publicity and we have had guests attend from industries and other railroads who have been most favorably impressed.

Officers for the current year are:

President	E. L. Reeves	Trainmaster, B. & O. C. T.
Vice-President	R. J. Blagburn	Gen. freight agent, B. & O.
Treasurer	E. F. Jusko	Chf. clerk to gen. frt. agent, B. & O. C. T.
Secretary	A. J. Rosenke	Chf. clerk, Capital Expend. Bureau, B. & O. C. T.
Librarian	W. P. Finnegan	Agent, B. & O. C. T.

E. L. REEVES
President
Administration-Personnel-Management-Study Group

New Book . . .

FUEL OIL MANUAL. By Paul F. Schmidt. Published by the Industrial Press, 148 Lafayette street, New York 13. 160 pages, 6 in. by 9 in., bound in Fabrikoid. Price, $3.50, plus 40 cents postage to Canada or overseas.

Until recently the problems related to purchasing, storing and using diesel locomotive fuel were very largely confined to securing fuel oil which met the specifications recommended by the builders. As the quantity of diesel fuel used by the railroads has increased, other demands for the so-called middle distillates, particularly for space heating, have also increased, and an adequate supply of fuel meeting the locomotive builders' highly restrictive specifications is becoming less readily available. Modifications of these specifications to increase available sources of diesel fuels are becoming desirable, and a thorough knowledge of liquid fuels by all having to do with their purchase and use, comparable with that long employed in the purchase of coal, is becoming necessary.

The Fuel Oil Manual, while not specifically dealing with diesel fuel, covers the entire range of fuels obtained by refining crude oil. The treatment is non-technical, readily understandable and complete in its scope. The essentials of petroleum chemistry and refining processes are set forth briefly and various grades and types of fuel oil are described. A chapter is devoted to each measurable quality of fuel oils and in it the method of determination and the scale of its measurement are described. The last nine chapters are devoted to problems pertaining to storage and handling, including among those preheating of oils, sampling storage tanks, and the compatibility and stability of fuels when mixed in storage and the employment of additives.

NO SCRAP... NO STEEL!

QUALITY
YOUNGSTOWN
SERVICE

SCRAPPY SAYS:

AID DEFENSE
MORE SCRAP
TODAY...
MORE STEEL
TOMORROW

THE iron and steel industry faces a serious scrap shortage, growing more critical every day. . . . It will be impossible for producers to make the steel tonnages demanded for rearmament and essential civilian needs, unless consumers cooperate by furnishing *more scrap*. . . . Most desperately needed now is heavy industrial iron and steel scrap. . . . Keep the cobwebs from gathering at your own plant by turning in more of your own scrap today.

The Youngstown Sheet and Tube Company

General Offices--Youngstown 1, Ohio
Export Offices--500 Fifth Avenue, New York
MANUFACTURERS OF CARBON ALLOY AND YOLOY STEELS

The steel industry is using all its resources to produce more steel, but it needs your help and needs it now. Turn in your scrap, through your regular sources, at the earliest possible moment.

GENERAL NEWS

Oregon Car Shortage

(Continued from page 37)

freight claim prevention work being currently undertaken, stressing that which is being done in connection with specific commodities. F. M. Wilson, assistant to the chairman of the Association of Western Railways, Chicago, told members of the importance of careful terminal switching and handling to avoid loss and damage.

The board's Transportation Committee took time out to compliment the railroads of the area for the "excellent manner in which the past season's grain crop was handled, making it the easiest harvest on record despite the large crop."

Whittemore Tells N. E. Board of RR Plight

"Unless the drain on railroad revnues for services no longer sufficiently used by the public to pay their way is corrected, unless featherbedding practices of railroad labor are done away with, New England railroads will be forced to charge such high freight rates to maintain themselves as to increase the already heavy burdens which are a limiting factor in our operations," Laurence F. Whittemore, president of the Brown Company, said in Bretton Woods, N. H., on September 27.

Addressing the New England Shippers Advisory Board on the first day of its two-day meeting, Mr. Whittemore, a former president of the New York, New Haven & Hartford and of the Federal Reserve Bank of Boston, added:

"I have been following with a great deal of interest the efforts of some New England railroads to rid themselves of unused and unneeded passenger service which public authority is forcing them to continue. It is just as much the duty of regulatory commissions to see to it that money is not wasted in this regard as it is to see that the public gets what it really wants. I have no qualifications in my statement when I say that it will be impossible for railroads to give freight shippers the service they must have until public authority insists that railroads do not waste money on little used and uneconomical service. For one person who is benefited by such service there are thousands employed in industry whose chance of continued employment is decreased by the waste of the freight shippers' money entailed in continuation of service long outmoded and which the public has ceased to use."

Much Argument

Mr. Whittemore said that, despite some "great local minds" who say railroads should spend millions of dollars for modern equipment for light operation, his knowledge of railroading in New England has made him realize that only a few main lines in the region can maintain passenger service on an economical basis. There has been much argument, he continued, about methods of figuring passenger losses and, while he holds no brief for any particular method, Mr. Whittemore said he was convinced that at least on northern New England railroads losses in branch line and commuter passenger service today are so great that freight service in the area is jeopardized and its cost tremendously increased; adding that:

"I yield to no one in my regard for the great group of railroad men who man New England railroads. However, I feel their future is jeopardized by the insistence of their organizations on getting pay for work not performed. . . . The railroad men and women I know are too proud individually to accept money not earned and I feel that their real interest over the years is in the industrial advancement of the region and its economic health rather than in the immediate 'quick buck' which they may get through labor agreements enforced on railroad management at the point of a sword through political pressure. The future of the industry and of all industries is threatened by such practices and no individual can win in the long run if that continues."

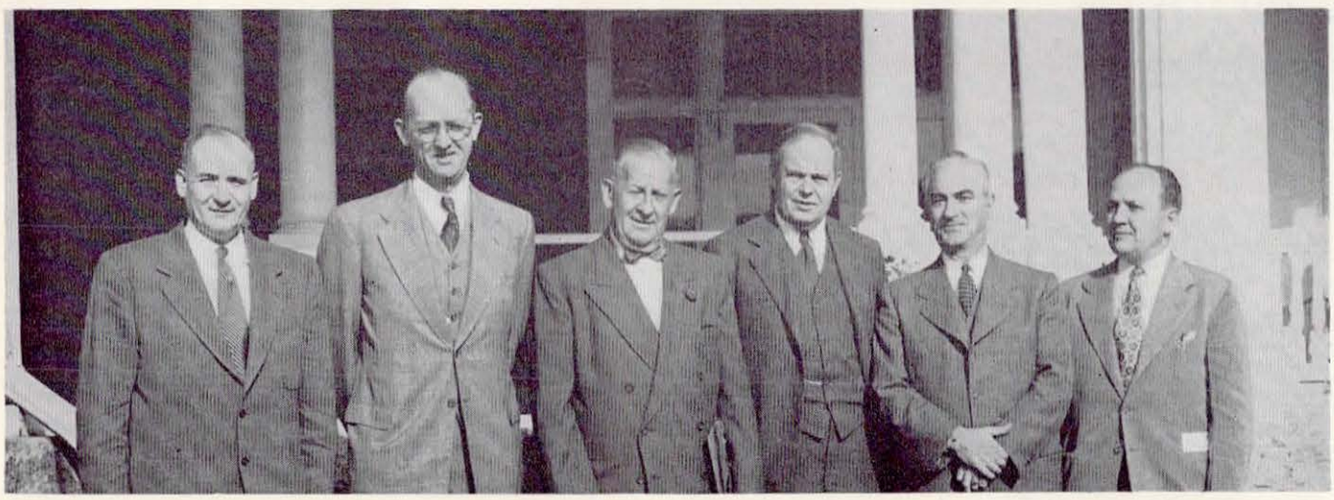
Many Jobs Lost

K. N. Merritt, vice-president of the Railway Express Agency, told the meeting that 40,000 expressmen have lost their jobs since 1946 as a direct result of competition from government-subsidized parcel post. Lashing out against government intrusion into industry, Mr. Merritt said his company has lost 65 per cent of its business since 1946 to the government parcel post service, the losses of which, amounting to more than $100,000,000 a year, are made up by taxpayers.

Even the increase in parcel post rates effective this month will not meet operating costs, he said, pointing out that the law establishing parcel post stipulates it should be self-supporting. Stressing the need for passage by Congress of H.R. 3465, Mr. Merritt explained this bill would reduce weight and size limitations of parcel post shipments but would not effect any change in third and fourth class post offices, or rural or star routes, nor would there be any change in parcel post shipments of baby fowl, live plants, shrubs and agricultural commodities. Farmers and those living in smaller communities would not be affected. Passage of the bill would restore shipping of goods to private channels, which will stabilize business and employment in that field, Mr. Merritt said.

A recommendation by the legislative

(Continued on page 59)



Among those attending the New England Shippers Advisory Board meeting at Bretton Woods, N. H., on September 27-28 were, left to right: P. R. Goulette, general manager of the New Haven; H. E. Bixler, general superintendent, transportation, Boston & Maine and Maine Central; William H. Day, manager, transportation bureau, Boston Chamber of Commerce, and chairman of the board; R. G. Henderson, freight traffic manager, Boston & Albany; Caleb R. Megee, vice-chairman, Car Service Division, Association of American Railroads; and Paul Miller, district manager, C.S.D.

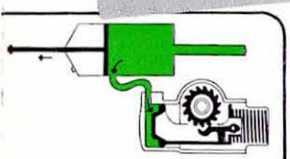
It's hard to see how they could make it any simpler ...or any Better!

Westinghouse Type D Pneumatic-Automatic Slack Adjuster for Freight Cars

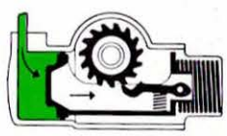
Once you see a Westinghouse Type D Slack Adjuster torn down—you'll see why it stays on the job so long, without demanding attention from busy maintenance departments.

There are only 5 operating parts. Each one is engineered by air brake men who know the importance of complete dependability and long, trouble-free service. There are no complicated mechanisms, no delicate parts. *You don't just trade one maintenance job for another when you install this equipment.*

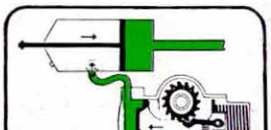
Westinghouse Type D Slack Adjusters are pneumatically powered, fully automatic in operation, and maintain uniform piston travel for the life of the brake shoes. The simple, positive cycle of operation is diagramed below. Westinghouse Type D Slack Adjusters are easily applied to existing freight cars. Basic design proved in many years of passenger car application.



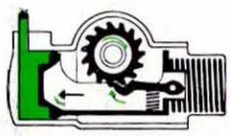
Excessive piston travel in air brake cylinder uncovers port, admits air to slack adjuster cylinder.



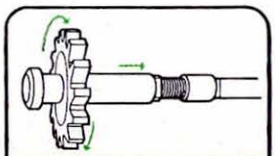
Air pressure moves slack adjuster piston back, compressing piston spring.



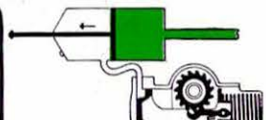
When brake is released, air in slack adjuster piston is vented. Piston spring returns slack adjuster piston.



Pawl on slack adjuster piston engages ratchet nut . . . advances it one notch.



Rotation of ratchet nut turns nut on tie rod, shortening the connection.



Process is repeated with each brake application until proper brake piston travel is established.

Westinghouse Air Brake Co.
AIR BRAKE DIVISION
WILMERDING, PA.

Brakes are Basic to Railroad Progress

TICKET OFFICES

DINING CARS

ACCOUNTING DEPARTMENT

"National Machines save us about $300,000

-Southern Railway

"We use National Cash Registers in our Dining Cars, Ticket Offices, and Freight Stations; and National Accounting Machines in our Accounting and Payroll Departments.

"We estimate that our National Machines save us about $300,000 a year. This saving pays for these machines in approximately 13 months."

Ernest E. Norris

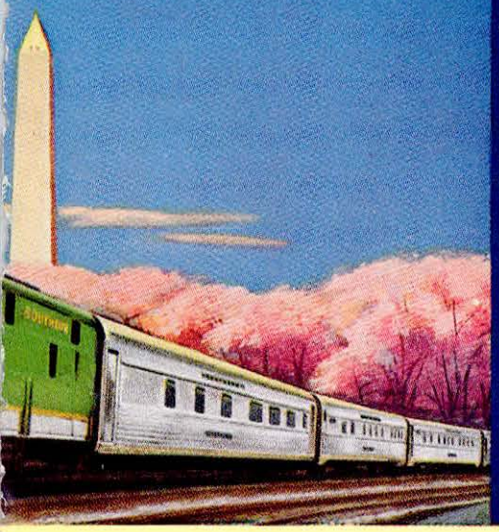
President

SOUTHERN RAILWAY SYSTEM

PAYROLL DEPARTMENT

a year!"

System



Southern Railway System's "National-ized" control is another striking example of the broadened application of National Machines to the problems of American business:

1. MODERN NATIONAL CASH REGISTERS are, in fact, Sales-Accounting Registers. They give *protection* that saves money, plus *information* that makes money.

They furnish *integrated* mechanized control. They enforce the correct original entry on every transaction; then, as a by-product, they automatically provide vital classified information.

2. NEW NATIONAL ACCOUNTING MACHINE has time-and-effort-saving features never before combined on one machine. On some jobs it does ⅔ of the work automatically, and what it does automatically the operator cannot do wrong.

It handles every kind of accounting job, including those requiring typed description. It can be kept in profitable use every hour of the day by switching it—*in seconds*—from one job to another.

Concerns of every size and kind are profiting from National Systems.

THE NATIONAL CASH REGISTER COMPANY

Nationals pay for themselves out of the money they save. Let our local representative — a trained systems analyst—show what you *can save with the National System adapted to your needs. Or write us at Dayton 9, Ohio.*

National
ACCOUNTING MACHINES
CASH REGISTERS • ADDING MACHINES

Economical and *Fast* Steam Generation For *all* purposes with the *Elesco* Automatic Steam Generator

Push 2 controls and the generator operates automatically.

It saves space and weight.

Low investment cost.

Quick installation.

Steam is available in 3 minutes after generator is started.

Dependable safety controls.

Employs Controlled Recirculation... an advanced engineering principle.

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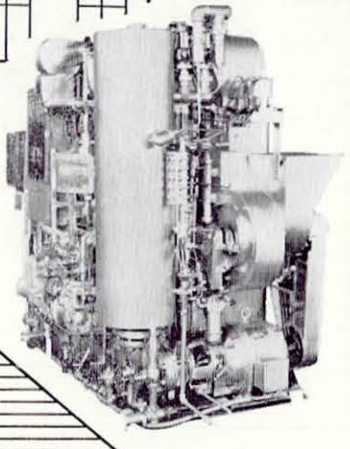
If you want the best in automatic steam generators, you will specify ELESCO... a name that has dependably served the railroads for many years.



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(Continued from page 54)
committee, headed by Arthur H. Ferguson, manager of the Foreign Trade and Transportation Division of the Providence (R.I.) Chamber of Commerce, that the board go on record as favoring Senate bill S. 1603, was approved. The bill, introduced by Senator Johnson, Democrat of Colorado, would, the committee said, except when such action interfered with production of material needed by the armed forces, require administration of section 101 of the Defense Production Act of 1950 so as to provide steel and other materials for constructing not less than 12,000 new freight cars each month, as long as there are unfilled orders for not less than 48,000 such cars; and not less than 400 new railroad locomotives each month, as long as there are unfilled orders for not less than 1,600 such locomotives. It would also require maintaining in good repair 96 per cent of freight cars and 90 per cent of locomotives owned by railroads subject to the Interstate Commerce Act.

Bricker To File Report On Myers' Group Hearings

Senator Bricker, Republican of Ohio, expects to file shortly with the Senate a report based on last year's extensive hearings on domestic land transportation, conducted by a subcommittee of the Senate Interstate and Foreign Commerce Committee.

The report will highlight points brought out in the Senate hearings, and will "suggest areas that might be looked into" in the transport field. The hearings were conducted by former Senator Myers, Democrat of Pennsylvania, pursuant to Senate Resolution 50.

The chairman of the Senate committee, Senator Johnson, Democrat of Colorado, is expected to go over the report with Senator Bricker before it is filed. This review had not been completed as of October 3, according to members of the committee staff.

As this issue went to press there was no indication of any proposed legislation being introduced in conjunction with the report.

SUPPLY TRADE

Arthur I. Gibson has been appointed manager of the newly formed sheet and strip division of the general sales department of **United States Steel Supply Company.** He was formerly product representative for the company's sheet and strip division in Pittsburgh.

The **Standard Railway Equipment Company** is going ahead with certain units of its long-range modernization and expansion program for its Hammond, (Ind.) plant, although the cost, under today's conditions, may run somewhat higher than the original estimate of between $2½ million and $3 million. The program anticipates an additional 150,000 sq. ft. of factory floor space plus greater utilization of present space through modernization.

Orville F. Figley, Chicago district manager for **United States Steel Corporation,** has been named assistant to vice-president — sales. **Keith P. Rindfleisch,** Pittsburgh district manager, will come to Chicago to succeed Mr. Figley. **Wesley N. Gordon,** manager of the alloy division, will succeed Mr. Rindfleisch.

The **Westinghouse Electric Corporation** will undertake a $296,000,000 expansion program extending beyond 1953. Productive capacity will be increased by 50 per cent. A special meeting of stockholders in December will be asked to vote on a proposal to increase the firm's authorized debt from $150,000,000 to $500,000,000 in connection with the program. It is the company's present intention to raise new capital through sale of debt securities, of which the amount, type and time of issuance have not yet been determined.

William G. Polley (above), southern area special representative, has been appointed district sales manager of the Acme Steel Company, with headquarters at Atlanta, Ga. Charles R. Lammers (below), succeeds Mr. Polley as southern area special representative at that point

Edward T. Doherty, president and director of Apex Railway Products Company, has been elected chairman of the board, a newly created position

Leo F. Duffy, vice-president of the **Youngstown Steel Door Company,** will join **Apex Railway Products Company** as president and director. Mr. Duffy was graduated from Corpus Christi College, Galesburg, Ill., in 1916. After serving in the U. S. Army in World War I, he was employed by the Chicago, Burlington & Quincy in various engineering positions. In 1926 he joined the Chicago Pneumatic Tool Company in their railroad sales division, leaving there in 1937 to go with Youngstown Steel Door.

Leo F. Duffy

Donald Petersen has been appointed vice-president in charge of production of the **Standard Railway Equipment Manufacturing Com-**

How much more money will you lose here?

Your answer to that question depends greatly on how much more *steam* is wasted on your trains—this year and in winters to come. As you know, insufficient steam in cold weather is a major reason why trains arrive late. And late trains cost you dearly in overtime, in general overhead and—above all—in loss of passenger good will.

Yet, much of this loss is completely unnecessary. Your wasted-steam problem can be corrected immediately—if you will install Honeywell Car Heating Systems in your passenger cars! You see, Honeywell equipment saves up to 40% on steam—because it exposes only a short length of steam pipe in each car to icy air.

Moreover, Honeywell Systems are much simpler in construction. This greatly cuts down on heating inspection and maintenance, virtually ends your frozen pipe problem. And Honeywell *electronic* thermostats keep your passengers much more comfortable—because they provide *really* accurate and reliable temperature control.

Sound good to you? Then why not get *all* the facts on what Honeywell Car Heating Systems can do for your railroad. Call your local Honeywell office *today*. Or write Honeywell, Dept. RA-10-190, Minneapolis 8, Minnesota.

MINNEAPOLIS
Honeywell

First in Controls

pany, with headquarters in Chicago. He will direct all manufacturing activities at the company's plants in Hammond, Ind., New Kensington, Pa., and Lachine, Que. Mr. Petersen came to Standard from Carnegie-Illinois Steel, where he spent five years in the

Donald Petersen

Gary works and in Pittsburgh, later being on the staff of the vice-president in charge of industrial relations. He joined Standard Railway in 1944 as assistant to the president, and since that time has had an active management role in production and operations. He was elected assistant vice-president a year ago.

Arthur J. Doyle and **James D. Ryan** have been elected vice-presidents of the **Camel Sales Company,** wholly owned subsidiary of the **Youngstown Steel Door Company,** and **Emmett P. Dowling, Jr.,** has been elected assistant vice-president of Camel Sales, all as announced in *Railway Age*, October 1, page 140.

Arthur J. Doyle

Mr. Doyle began his career as draftsman for the Erie in 1929 and joined the Advisory Mechanical Committee in 1930. He joined Youngstown Steel Door in 1937 as a draftsman and in 1941 was promoted to sales engineer. In November 1944, he was elected assistant vice-president.

How much money are you losing here?

When you see open windows in your building during the heating season, you're wasting fuel—*as much as 20% per year!* You're *overheating* parts of your buildings in order to keep the other parts comfortable.

Such losses are often caused by failure of worn-out heating controls to operate properly. If that's true in your case, there's an easy way to modernize your control system. Simply replace your old instruments one or two at a time—out of your maintenance budget! No need to ask for a special appropriation, no need to make structural changes! And the savings in fuel should quickly pay for the new equipment.

For a free survey of *your* heating control needs, call your local Honeywell office. Or write Honeywell, Dept. RA-10-190, Minneapolis 8, Minnesota.

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MAKERS OF ALLOYS

CHEMICALS AND METALS

Mr. Ryan began his business career with Lawrence Stern & Co. as a bond salesman. In 1928 he joined the Ryan Car Company as a mechanic and later was appointed general manager and

James D. Ryan

treasurer. From 1940 to 1944 he was shop supervisor in the small arms ammunition plant of the DuPont Company at Denver. Mr. Ryan joined the sales force of the Camel Sales Company as assistant vice-president and

Emmett P. Dowling, Jr.

held this position until his recent promotion.

Mr. Dowling worked on special assignments for the government out of Washington, D.C., during World War II. He resigned that position in 1946 to join Youngstown Steel Door.

Carl A. Ten Hoopen has been appointed Pacific Coast sales manager of the Cyclone Fence division of the **American Steel & Wire Co.**, a **U. S. Steel Corporation** subsidiary. He succeeds **Raymond G. Russell,** retired.

W. C. Landis and **A. M. Wiggins,** vice-presidents of the **Westinghouse Air Brake Company,** have been appointed to the newly created positions of general manager of the Air Brake division and general manager of the Union Switch & Signal division, respectively. Mr. Landis will be responsible for operations and earnings of the Air Brake division, which operates plants at Wilmerding, Pa., and Emeryville, Cal., and Mr. Wiggins will have similar responsibilities for the signal division operations at Swissvale, Pa.

Mr. Landis joined Westinghouse Air Brake in 1915. He worked successively as plant superintendent, works man-

W. C. Landis

ager and vice-president in charge of manufacturing operations and industrial relations at all company plants. For a period he was works manager of Bendix-Westinghouse Automotive Air Brake Company.

Mr. Wiggins joined the company in 1933 as a member of the legal department, of which he became head

A. M. Wiggins

in 1937. He subsequently was assistant vice-president, assistant to the president and vice-president. As vice-president he formerly headed the industrial products division, and more recently has been in charge of planning and development of new activities and of the company's foreign subsidiaries.

John M. Craig, assistant to the works manager of **General Motors Diesel, Ltd.,** has rejoined the **Electro-Motive Division** of **General Motors Corporation** at La Grange, Ill., for duties on the administrative staff, after completing his assignment in London, Ont.

The **Copperweld Steel Company,** Glassport, Pa., has purchased all outstanding stock of the **Flexo Wire Company,** Oswego, N. Y. The latter will be operated as a wholly owned subsidiary of Copperweld.

The Cleco division of the **Reed Roller Bit Company,** Houston, Tex., has appointed the **Dawson MacDonald Company,** 141 Pearl street, Boston, Mass., and the **Louisville Mill Supply Company,** Louisville, Ky., as distributors for Cleco products in their areas.

Ralston B. Reid has been appointed an assistant manager of the advertising and sales promotion department of the apparatus marketing division of the **General Electric Company.** In his new position, Mr. Reid will coordinate activities of the department's five advertising sections, visual education section, and the company news bureau at Schenectady. He formerly was manager of industrial advertising for the department.

H. V. Rasmussen has been appointed executive engineer at the Wellsville, N. Y., plant of the **Worthington Pump & Machinery Corp.**

The **Westinghouse Air Brake Company** has acquired the entire capital stock of **Melpar, Inc.,** of Alexandria, Va., and Cambridge, Mass. **Thomas Meloy** will continue as president of Melpar and will retain his entire staff and organization.

L. K. Stringham has been appointed chief engineer for the **Lincoln Electric Company** of Cleveland. **G. G. Landis** will continue as engineering vice-president. Mr. Stringham was graduated from Cornell University as an electrical engineer and joined Lincoln Electric in 1933. He has worked continuously in the engineering department and for the past two years has been director of welding development.

The **Flintkote Company,** New York, has appointed the **Ellcon Company,** 30 Church street, New York, as special manufacturer's sales representatives to the transportation industry for Flintkote products in the eastern section of the United States.

OBITUARY

Charles W. T. Stuart, president of the Safety Car Heating & Lighting Co., died October 1 in the United Hospital, Port Chester, N. Y. He was 63 years old.

Mr. Stuart was born in Philadelphia and was graduated from the Drexel

How the biggest jigsaw puzzle in the world gets put together!

• Putting together all the good things that go to make America's standard of living the highest in all the world calls for a mighty job of transportation.

And that's a job for America's railroads!

For only the railroads – with the tremendous capacity and high efficiency made possible by trains of cars on tracks of steel – can do it. The railroads link farm, mine and forest . . . factory, foundry and warehouse . . . with homes in cities, towns and villages in every corner of the nation.

In doing their job, the railroads move *more tons* of freight—*more miles* —at a lower average charge—than any other common carrier transportation system in the world!

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Institute of Technology. He began his business career in 1908 with the Baldwin Locomotive Works. From 1909 to 1924 he worked in the motive power department of the Pennsylvania and

Charles W. T. Stuart

in the latter year joined Safety Car Heating & Lighting as a sales representative. He was appointed southeastern district manager in 1933 and also Philadelphia, manager of the Vapor Car Heating Company. Mr. Stuart was appointed assistant to the president of Safety in 1943, and was elected vice-president in charge of sales in 1946. He was elected executive vice-president in 1947 and president in 1948.

C. L. Best, one of the founders of the Caterpillar Tractor Company, and chairman of its board and a member of its executive committee, died in San Francisco on September 22, at the age of 73. When he was 18, Mr. Best was named buyer for his father's factory, the Best Manufacturing Com-

C. L. Best

pany, and by the time he was 20, he was superintendent. Mr. Best continued as president of this firm until 1925, when it and the Holt Manufacturing Company were merged to form the Caterpillar Tractor Company. Mr. Best became chairman of the board of the new organization.

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THE NEW WAY TO WEIGH

- **ELECTRIC LOAD CELLS**
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The Streeter-Amet Company of Chicago announces the new Ametron Electronic Scale. Streeter-Amet engineers, working with the engineers and scientists of the Baldwin-Lima-Hamilton Corporation have created this revolutionary weight determination instrument. By the use of electronic cells this new Ametron Scale will record and print on ticket, tape or even a ledger remote from the scale the exact weight.

Write for brochure explaining the simplicity of construction, the low maintenance and the ease of installation of this new scale.

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- Remote Indicators
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The long winter nights ahead drastically reduce the number of daylight working hours . . . add seriously to yard safety problems.

That's why it's particularly profitable to make a careful analysis of your night lighting facilities *now* — especially in locations that operate on a 24-hour-a-day schedule. A Graybar Railroad Lighting Specialist is available to help *you* make such a survey. He'll be glad to work with you in the solution of difficult outdoor lighting problems and furnish — without obligation — detailed installation recommendations, prices, specifications and such other data as you may require. Important, too, is the fact that Graybar distributes the most complete selection of lighting units and lamps available from a single source — you can *always* be sure of completely impartial advice.

For "anything electrical" make it a point to see the *Pocket List* for the address of the Graybar office nearest you. *Graybar Electric Company, Inc. Executive Offices: Graybar Bldg., New York 17, N. Y.*

198-2010

OFFICES AND WAREHOUSES IN OVER 100 PRINCIPAL CITIES

EQUIPMENT AND SUPPLIES

FREIGHT CARS

The **Atlantic Coast Line** has ordered two 50-ton "Unicel" box cars from the Pressed Steel Car Company at an estimated cost of $18,500. The cars, delivery of which is expected in the first quarter of 1952, will be used exclusively on the Coast Line for test purposes.

The **Duluth, Missabe & Iron Range** has ordered 250 70-ton hopper cars from the Pressed Steel Car Company.

LOCOMOTIVES

The **Erie** has ordered 13 diesel-electric locomotive units as follows: Electro-Motive Division of General Motors Corporation—three 1,500-hp. general purpose and two 1,200-hp. yard-switching units (the former scheduled for delivery next April and the latter next May); American Locomotive-General Electric Companies—four 1,600-hp. general purpose units, scheduled for delivery in February 1952; Baldwin-Lima-Hamilton Corporation—four 1,600-hp. general purpose units, scheduled for delivery in January-February, 1952. Authorization by the Erie's directors to purchase this equipment at an estimated cost of $1,900,000 was reported in *Railway Age* September 3, page 82.

SIGNALING

The **Grand Trunk Western** has ordered from the Union Switch & Signal Division of Westinghouse Air Brake Company material to install centralized traffic control on approximately 41 miles of single track between West Pontiac, Mich., and Durand. The style C control machine will be installed at Durand. In addition to code equipment, the order includes styles H-5 searchlight signals, M-23A dual-control electric switch machines, SL-21A electric switch locks, relays, rectifiers, switch circuit controllers and housings. Field installation will be handled by railroad forces.

The **St. Louis, Brownsville & Mexico** has ordered equipment from the General Railway Signal Company for installation of a traffic control system from Vanderbilt, Tex., to McFaddin, 40.7 miles. The control machine, to be located at Vanderbilt, will have a 60-inch panel equipped with 27 lights and 20 levers for control of five switch machines, 13 locks and 38 signals. Model 5D switch machines, types D, G, and L color-light signals, and type B plug-in relays are included in this order.

IRON & STEEL

The **Norfolk & Western** has ordered 30,000 net tons of rail from the United States Steel Company and 10,000 net tons from the Bethlehem Steel Company.

CAR SERVICE

I.C.C. Service Order No. 881, effective from October 1 until March 31, 1952, unless otherwise modified, authorizes railroads serving California and Arizona to furnish, in lieu of each box car ordered, not more than four S.F.R.D. or P.F.E. refrigerator cars (not suitable for transporting commodities requiring protective service) for the transportation of uncompressed cotton from California and Arizona origins to points for compression.

ORGANIZATIONS

Homer C. King, deputy administrator of the Defense Transport Administration, will be guest speaker at the luncheon session of the **Mid-West Shippers Advisory Board** on October 18. As *Railway Age* announced on September 17, the meeting will be held at French Lick Springs, Ind., on October 17 and 18. L. H. S. Roblee, president, North American Car Corporation, will be toastmaster at the luncheon session, and K. N. Merritt, vice-president, traffic, Railway Express Agency, will speak to the board on pending parcel post legislation and what it means to buyers of transportation. William E. Callahan, manager, Open Top Section, Car Service Division, Association of American Railroads, will report on the nation's current transportation situation.

Edward C. Hof, comptroller of the American Brake Shoe Company, New York, was recently reelected assistant treasurer of the **Controllers Institute,** and T. J. Tobin, vice-president and comptroller of the Erie, at Cleveland, was elected vice-president of the **Controllership Foundation, Inc.,** research branch of the Institute.

The **Women's Traffic Club of San Francisco** will hold its 26th birthday party in the Gold Room of the Fairmount Hotel, on October 18. A. T. Mercier, president of the Southern Pacific, will be the guest speaker.

The **Women's Traffic Club of New York** will hold its next regular meeting on October 16, at the Park Sheraton Hotel, at 7 p.m. Charles B. Roeder, general traffic manager of American Home Foods, Inc., will speak on "Business with Transportation."

The first meeting of the 1951-52 season of the **New York Railroad Club** will be held October 18. Frederic B. Whitman, president of the Western Pacific, will speak on "Some Personnel Developments in the Railroad Field." A W.P. movie—"A Prospective Employee Gets a First Look at Western Pacific's Handling of Freight Business"—also will be shown.

FINANCIAL

Chicago & Eastern Illinois.—*New Lines to Joppa, Ill.*—The I.C.C. has authorized intervention in this proceeding by the General Committee of Adjustment of the Brotherhood of Locomotive Engineers on the C.&E.I., and the General Grievance Committees of the Brotherhood of Locomotive Firemen & Enginemen and the Brotherhood of Railroad Trainmen on the C.&E.I. The labor groups indicated they would join with the C.&E.I. in opposing pending applications of the Chicago, Burlington & Quincy and the Cleveland, Cincinnati, Chicago & St. Louis (New York Central) for authority to construct rail lines into Joppa, Ill. The C.&E.I. already serves Joppa, where a large steam generating plant is being constructed. The plant will use an estimated 6,500 tons of coal per day. The labor committees said construction of the competing rail lines "will be adverse to the employment, financial and other interests of a substantial number of (C.&E.I.) employees."

Chicago, Burlington & Quincy.—*Trackage Rights.*—This road has applied to the I.C.C. for approval of a contract covering its use of Union Pacific trackage between Sterling, Colo., and Union, approximately 23.7 miles. The Burlington has operated over this segment since 1900, and the new contract renews an agreement which expired September 14, 1950. The renewed agreement covers both local and through operation over the U.P. segment, including use of passing tracks, sidetracks, stations and other facilities. It would remain in effect until the year 2000.

Chicago Great Western.—*Trackage Rights.*—The I.C.C.'s Division 4 has authorized this road to discontinue operation under trackage rights over a line of the Chicago & North Western between Dodge Center, Minn., and Rochester, 19.2 miles. Only passenger service was provided over the line, and the Great Western said it handled an average of two passengers a trip in the first six months of 1951.

Gulf, Colorado & Santa Fe.—*Trackage Rights.*—The I.C.C.'s Division 4 has approved modification of this road's agreements with the Texas & New Orleans, increasing from $1.10 to $1.50 per train-mile the charges for operating over certain lines owned each other in Texas. The higher payments, retroactive to September 1, 1948, are designed to meet increased maintenance costs. The modified agreements cover G. C. & S. F. operation over approximately 59.2 miles of T. & N. O. trackage, and T. & N. O.'s use of approximately 76.2 miles of G. C. & S. F. trackage. Division 4 noted that the latter road is not now using approximately 27.5 miles of T. & N. O. line covered by the agreements.

Union Pacific.—*Acquisition of Laramie, North Park & Western.*—The I.C.C.'s Division 4 has authorized the U.P. to acquire the Laramie, a 111.3-mile line between Laramie, Wyo., and Coalmont, Colo. The U.P. already owns more than 99 per cent of the Laramie's common stock. This will be surrendered for cancellation, the property will be conveyed to the U.P., and the separate corporation will be dissolved. The U.P. is expected to effect economies in operation as well as savings in accounting and taxes. In 1942 the I.C.C. turned down an application by the Laramie for authority to abandon its entire line.

New Securities

Division 4 of the I.C.C. has **authorized:**

CHESAPEAKE & OHIO.—To assume liability for $6,300,000 of equipment trust certificates to finance in part 50 diesel-electric locomotives costing an estimated $7,962,960. (*Railway Age*, September 17, page 106.) Division 4's report approved sale of the certificates at 99.3917, with interest at 2¾ per cent—the bid of Halsey, Stuart & Co. and 14 associates; average annual cost of the proceeds to the C.&O. will be approximately 2.85 per cent. The certificates will be dated October 1, and will mature in 30 semiannual installments of $210,000 each, beginning April 1, 1952. The certificates were reoffered to the public at prices yielding from 2.1 to 2.9 per cent, according to maturity.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—To assume liability for $7,500,000 of series OO equipment trust certificates to finance in part 47 diesel-electric locomotives costing an estimated $10,068,622. (*Railway Age*, September 17, page 106.) Division 4 approved sale of the certificates at 99.7306, with interest at 2⅞ per cent—the bid of Halsey, Stuart & Co. and 14 associates; average annual cost of the proceeds to the road will be approximately 2.92 per cent. The certificates, to be dated October 1, will mature in 30 semiannual installments of $250,000 each, beginning April 1, 1952. The certificates were reoffered to the public at prices yielding from 2.1 to 2.95 per cent, according to maturity.

CHICAGO, ROCK ISLAND & PACIFIC.—To assume liability for $5,700,000 of series J equipment trust certificates to finance in part 30 diesel-electric locomotives and 520 box cars costing an estimated $7,655,925. (*Railway Age*, September 3, page 90.) Division 4 approved sale of the certificates for 99.708, with interest at 2¾ per cent—the bid of Salomon Bros. & Hutzler; average annual cost of the proceeds to the road will be approximately 2.8 per cent. The certificates, to be dated October 1, will mature in 30 semiannual installments of $190,000 each, beginning April 1, 1952. The certificates were reoffered to the public at prices yielding from 2.05 to 2.85 per cent, according to maturity.

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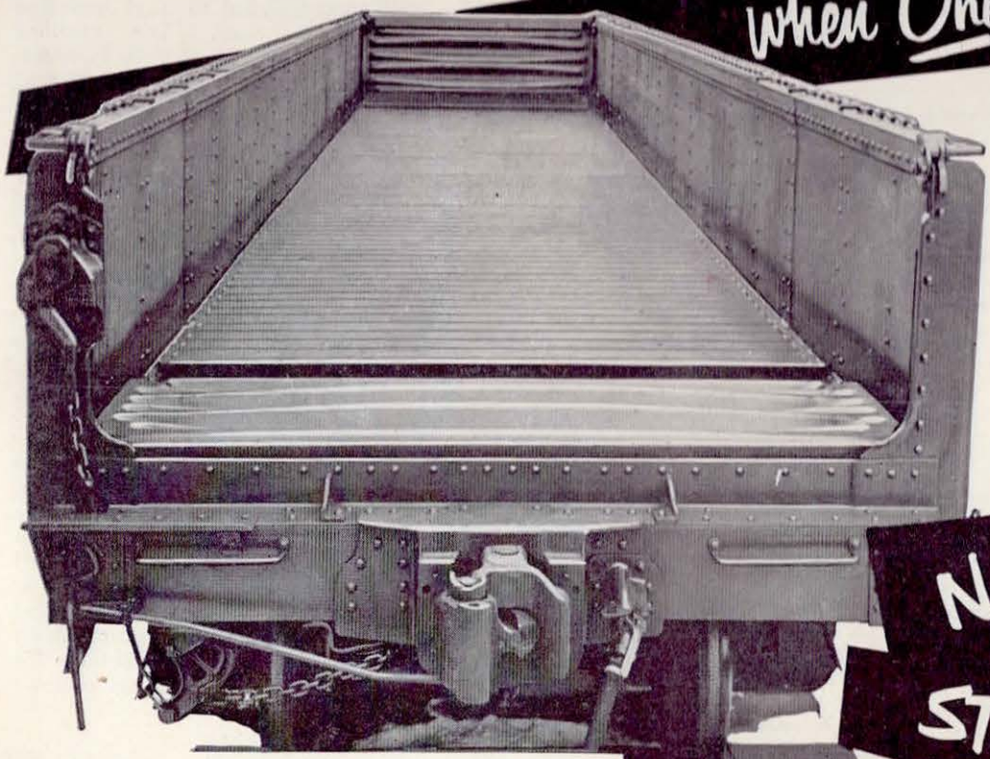

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Gondolas equipped with NAILABLE STEEL FLOORING do double duty because they are floored with steel . . . yet nailable. Without N-S-F, two types of gondolas are required to provide these features necessary to deliver rough freight and carry away open-top finished freight requiring blocking.

Made of N-A-X HIGH-TENSILE steel, N-S-F stands up under the roughest clamshell or magnet loading, yet takes nails easily, holds them tight, and provides an excellent surface for blocked or skidded loads.

Yes, N-S-F-equipped gondolas improve car supply with fewer cars. Shippers are served more quickly and efficiently-at less operating cost to the railroads.

PATENTS PENDING

N-S-F HOLDS BLOCKING BETTER — A GREAT LAKES STEEL PRODUCT

NAILABLE STEEL FLOORS are formed of rigid N-A-X HIGH-TENSILE *steel channels, welded in place and separated by spacers to form nailing grooves. Stiff plastic composition in the grooves forms a tight seal.*

51-SF-10

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Steel Floor Division • Ecorse, Detroit 29, Mich.

PRODUCER OF N-A-X HIGH-TENSILE STEEL

NATIONAL STEEL CORPORATION

NATIONAL STEEL

Dividends Declared

ATLANTIC COAST LINE.—5% preferred, $2.50, semiannual, payable November 10 to holders of record October 25.

ILLINOIS TERMINAL.—20c, quarterly, payable November 1 to holders of record October 10.

Security Price Averages

	Oct. 2	Prev. Week	Last Year
Average price of 20 representative railway stocks	56.51	56.48	48.75
Average price of 20 representative railway bonds	93.45	93.86	95.06

RAILWAY OFFICERS

EXECUTIVE

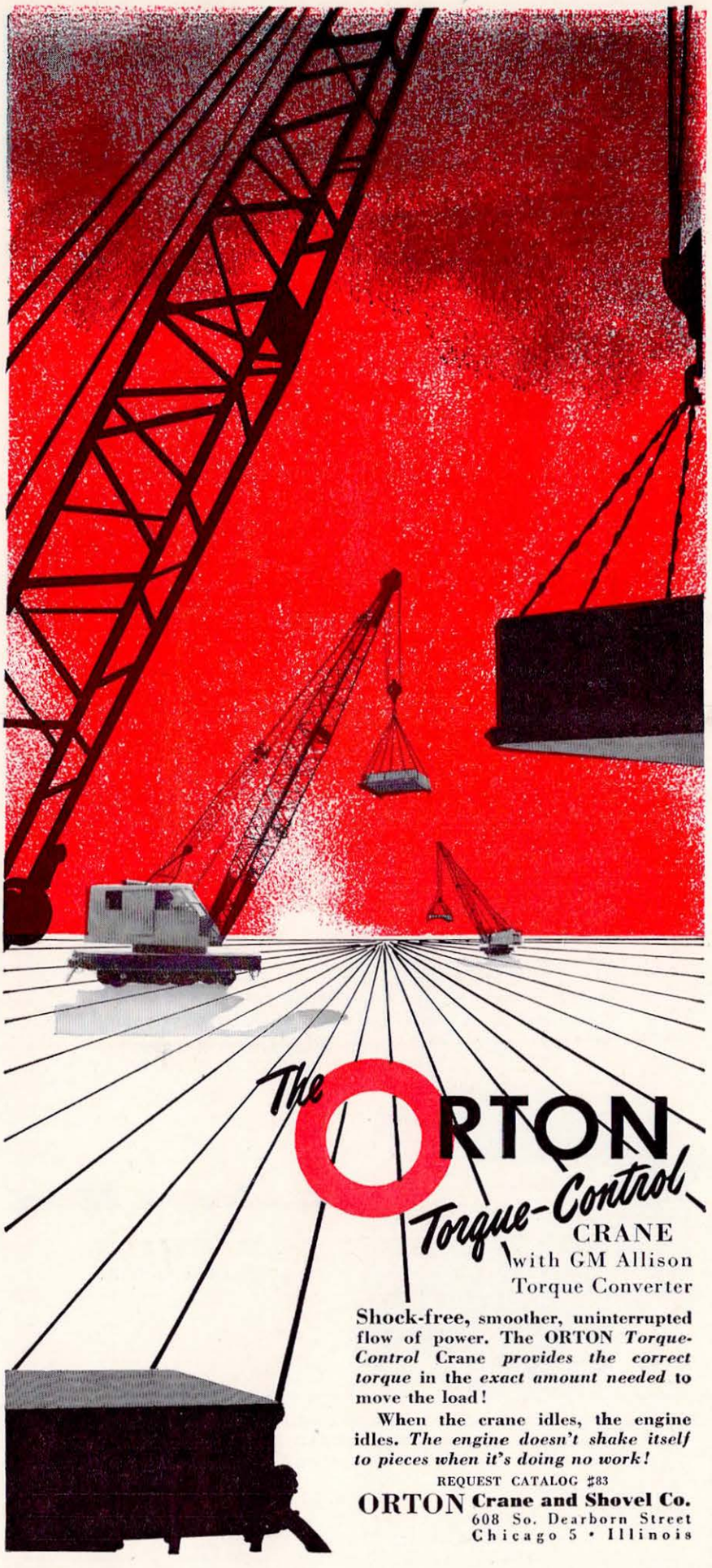
J. Edmund Andre, secretary to **Clair M. Roddewig,** president of the CHICAGO & EASTERN ILLINOIS, has been promoted to assistant to the president, succeeding **Kenneth Baxter,** who has been named assistant secretary-treasurer.

TRAFFIC

Henry B. Ward, formerly general agent of the MISSOURI PACIFIC at Tulsa, Okla., has been appointed general traffic manager of the KANSAS, OKLAHOMA & GULF, the MIDLAND VALLEY, and the OKLAHOMA CITY-ADA-ATOKA, with offices at Muskogee, Okla.

Carl W. Sunderbrink, general freight agent of the PITTSBURGH & LAKE ERIE at Pittsburgh, has been appointed freight traffic manager of the NEW YORK CENTRAL SYSTEM at Cleveland, succeeding **John H. Norwood,** who has been transferred to Cincinnati, to replace **Joseph A. Keegan,** retired. **G. Howard Ingalls,** assistant to freight traffic manager, has been appointed assistant freight traffic manager of the system at Cleveland.

John M. Hrebec, merchandise traffic manager of the MISSOURI PACIFIC at St. Louis, has been appointed freight traffic manager, succeeding **R. I. Wells,** who has been appointed president of the MISSOURI PACIFIC FREIGHT COMPANY. Mr. Hrebec is succeeded as merchandise traffic manager by **R. T. Williams,** who in turn is succeeded by **P. B. Dudek** as assistant merchandise traffic manager. Mr. Hrebec entered railroad service in 1916 as messenger in the local freight office of the M.P. at St. Louis, serving in this and various clerical capacities until 1923. His subsequent service with the same road included the positions of chief rate clerk at St. Louis; assistant chief clerk, solicitation department; chief clerk, supervision, St. Louis; general agent at Chicago and St. Louis; and assistant general freight agent at St. Louis.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Shock-free, smoother, uninterrupted flow of power. The ORTON Torque-Control Crane provides the correct torque in the exact amount needed to move the load!
When the crane idles, the engine idles. The engine doesn't shake itself to pieces when it's doing no work!
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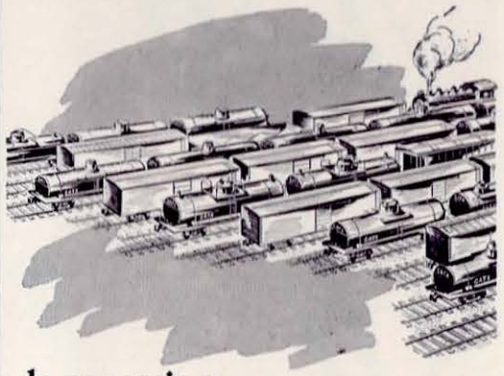

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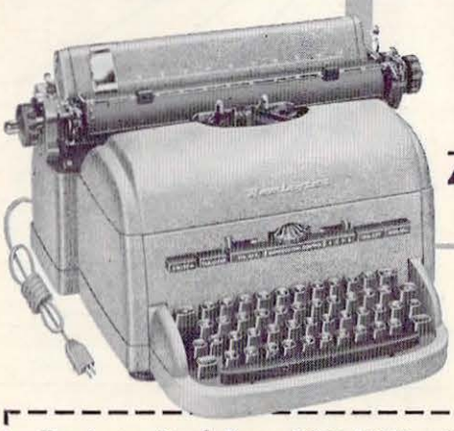

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OPERATING

Merle J. Reynolds has been appointed to the newly created position of manager of dining car service for the ROCK ISLAND. **H. H. Kaplan** continues to serve as superintendent of dining cars.

F. E. Weaver, trainmaster of the NEW YORK CENTRAL at Norwood, N. Y., has been transferred to the Syracuse division. **T. A. Seymour,** trainmaster of the Boston & Albany at Beacon Park, Allston, Mass., has been transferred to the St. Lawrence division of the N.Y.C. **H. F. Carey** has been appointed trainmaster of the B. & A.

E. C. Leather, assistant to superintendent transportation of the WESTERN MARYLAND, has been appointed superintendent transportation, with headquarters as before at Hagerstown, Md., succeeding **E. S. Garver,** deceased.

N. S. Westergard has been appointed assistant to the general manager of the SPOKANE, PORTLAND & SEATTLE, with headquarters in Portland, Ore. Mr. Westergard is succeeded by **E. P. Straughan,** roadmaster, who advances to system roadmaster, at Portland.

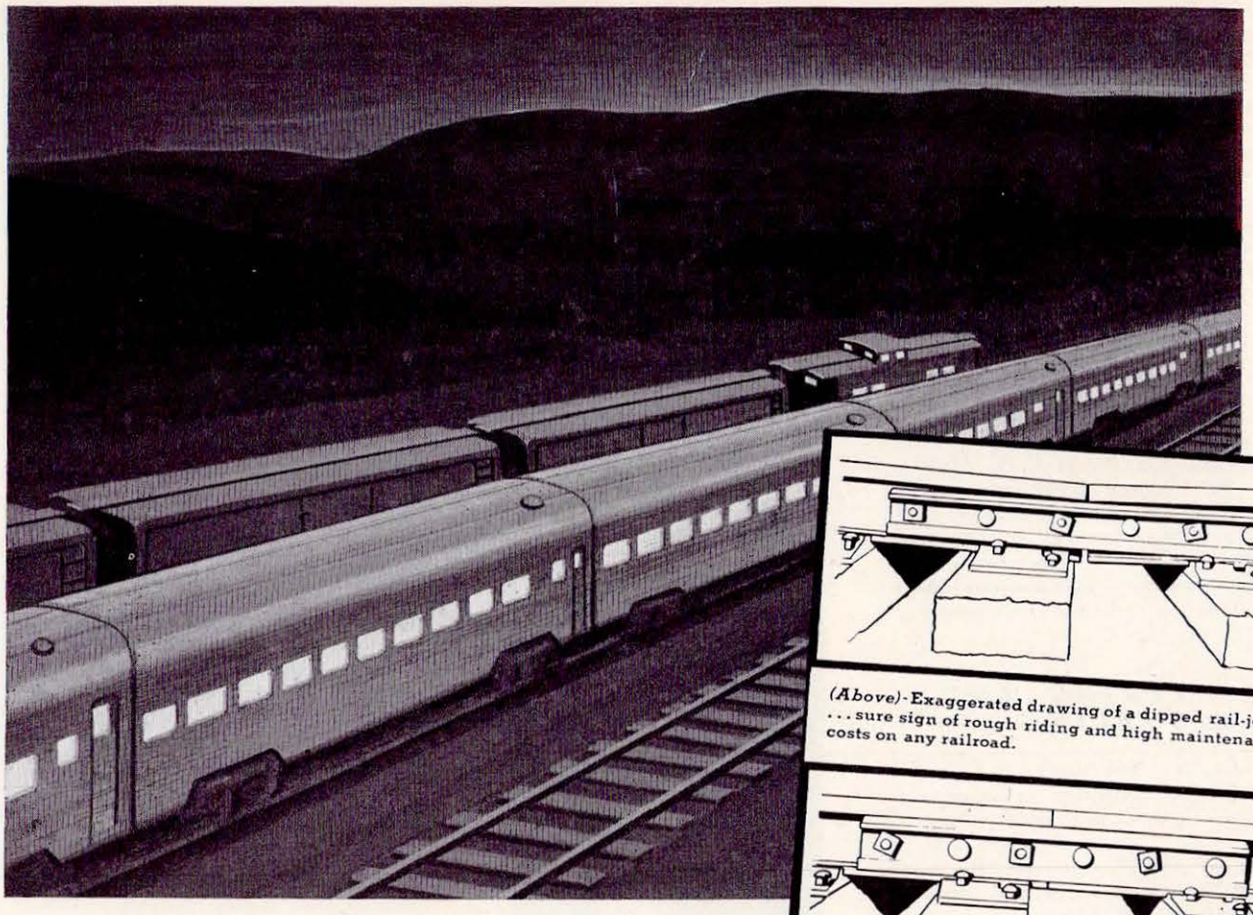
Edward J. Whelan, assistant to superintendent transportation of the ERIE, has been appointed assistant superintendent of transportation, with headquarters as before at Cleveland. The position of assistant to superintendent of transportation has been abolished.

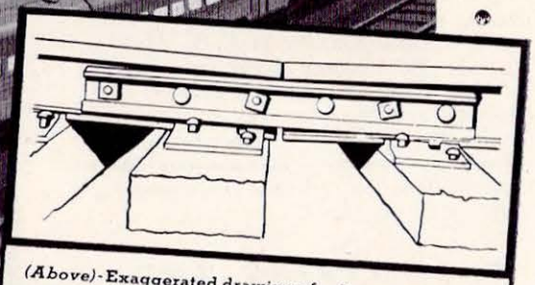
MECHANICAL

L. E. Legg has been appointed electrical engineer (equipment) of the CHICAGO & NORTH WESTERN, with headquarters at the Chicago shops.

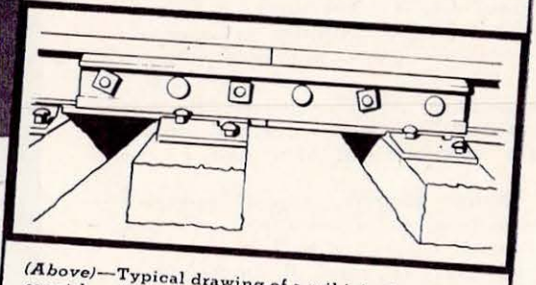
John C. Stump, assistant chief mechanical officer, has been appointed chief mechanical officer of the CHICAGO & NORTH WESTERN, succeeding **George W. Bohannon,** who has been named manager of purchases and stores for the PULLMAN COMPANY, as noted in *Railway Age* October 1, page 150. **George R. Andersen,** superintendent, car department, succeeds Mr. Stump, while **Walter C. Barrer,** assistant superintendent, car shops, succeeds Mr. Andersen. **Clarence P. Nelson,** general foreman, replaces Mr. Barrer.

W. C. Wardwell, assistant to general superintendent equipment of the NEW YORK CENTRAL SYSTEM, has been appointed superintendent of equipment, with jurisdiction over the territory Buffalo and East and the Boston & Albany, with headquarters as before at New York. **R. F. Batchman** and **G. J. Flanagan** have been



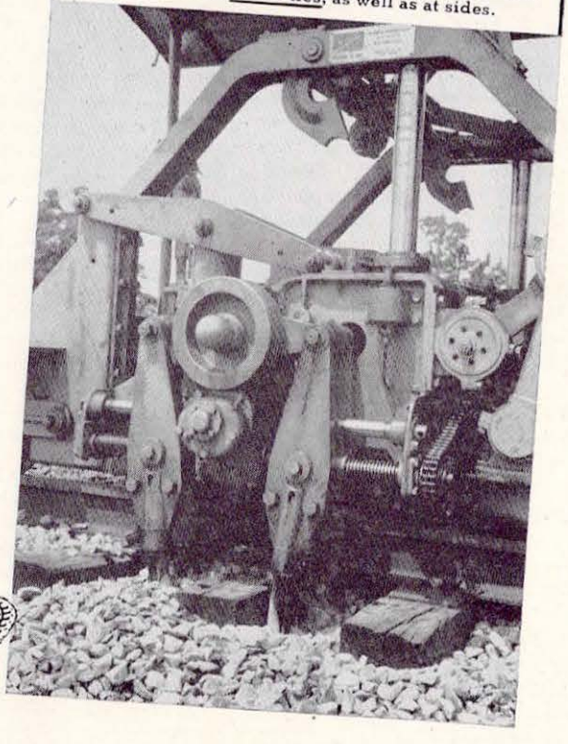


(Above)-Exaggerated drawing of a dipped rail-joint . . . sure sign of rough riding and high maintenance costs on any railroad.



(Above)—Typical drawing of a rail-joint brought to exact level *to stay* with the individually operated tamping arms of the Matisa Tamper.

(Below)—Tamping shoes of Matisa Tampers *do not* pound ballast to powder—vibratory pressure action compacts ballast *under ties*, as well as at sides.



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appointed assistant superintendents of equipment at New York. Mr. Batchman was formerly superintendent diesel shops of the B. & A. at West Springfield, Mass., and Mr. Flanagan was general car inspector of the N.Y.C. system. **J. A. Wetzel** has been appointed superintendent of shop (diesel) at West Springfield. **W. G. Ringland,** assistant superintendent equipment, Buffalo and East, at New York, has been appointed master mechanic at Avis, Pa., succeeding **R. J. Parsons,** who has been transferred to Albany, N. Y. **F. E. Edwards,** superintendent electric equipment, Buffalo and East, has been appointed master mechanic, with headquarters as before at Harmon, N. Y. **C. L. Hall** and **J. F. Cooney** have been appointed assistant master mechanics at Harmon and Syracuse, N. Y., respectively. The positions of superintendent of electric equipment and assistant superintendent of electric equipment have been abolished.

ENGINEERING AND SIGNALING

The GREAT NORTHERN has appointed **P. G. Seaholm** as superintendent of signals, with headquarters at St. Paul, succeeding **H. E. Brashares,** who has retired. **R. A. Johnson** has been appointed assistant superintendent of signals.

Worth Rogers, general superintendent of communications of the MISSOURI PACIFIC, at St. Louis, has retired after 43 years of service. Mr. Rogers was born near Mt. Sterling, Ky., and attended public schools in Mt. Sterling. He began his railroad career in August 1900 as a telegraph operator and wire chief on the Lexington & Huntington division of the Chesapeake & Ohio. After six years as a wire chief for Western Union, he joined the M.P. as manager and wire chief of the telegraph office at Wichita, Kan., in October 1908. Three years later, Mr. Rogers became telegraph inspector at the general offices in St. Louis. Promoted to telegraph engineer in December 1918, he subsequently was advanced to telegraph and telephone engineer, and in February 1928 became superintendent of telegraph. On May 1, 1951, his title was changed to general superintendent of communications.

B. D. Allison has been appointed electrical engineer (fixed property) of the CHICAGO & NORTH WESTERN, with headquarters at the Chicago shops.

W. R. Smylie, signal supervisor of the Houston and Victoria divisions of the TEXAS & NEW ORLEANS, has been appointed signal engineer, with headquarters remaining at Houston, succeeding **W. R. Meek,** who has retired.

SPECIAL

K. K. Schomp has been appointed first assistant manager of personnel of the SOUTHERN PACIFIC. Mr. Schomp succeeds **W. D. Lamprecht,** whose appointment as assistant general manager of the company is recorded elsewhere in this issue. **L. W. Sloan** has been appointed assistant manager of personnel. Like Mr. Schomp, he will be headquartered in San Francisco.

Robert C. Bannister, assistant to vice-president, personnel and public relations, of the NEW YORK CENTRAL SYSTEM at New York, has been appointed manager of personnel, succeeding **Walter G. Abriel,** who has been named assistant vice-president, personnel and public relations. Mr. Bannister was born in 1910 at Des Moines, Iowa. After serving in various positions with the Rock Island and the Chicago & North Western, and with the United States Navy during World War II, he was appointed general attorney of the C.&N.W. in 1946. Mr. Bannister served as counsel for the railroads in the 1945 and 1947 national wage and rules cases. He entered the Central's service in 1948 as assistant to vice-president, personnel and public relations.

Robert C. Bannister

The RUTLAND has named **Lawrence Richardson** to the post of consultant in the operation and mechanical division of the road. Mr. Richardson is mechanical consultant for the Boston & Maine and the Maine Central. He is also assistant general manager of the New York, Susquehanna & Western.

John E. Newman has been appointed director of labor relations of the NEW YORK CENTRAL SYSTEM and **John G. Castle** has been appointed director of training and employment. Messrs. Newman and Castle were formerly assistants to vice-president of personnel.

William E. Godfrey has been appointed safety agent of the ERIE at Cleveland, succeeding **Joe F. Corey,** assigned to other duties at his own request.

OBITUARY

Ralph Lawrence Tindal, 62, staff assistant in the purchasing department of the CHESAPEAKE & OHIO, died on September 27 at his home in Fairview Park, Ohio. Mr. Tindal was purchasing agent of the Nickel Plate from 1926 to 1942 and purchasing agent of the C. & O., Nickel Plate and Pere Marquette from 1942 to 1947.

E. S. Garver, 56, superintendent transportation of the WESTERN MARYLAND at Hagerstown, Md., died on September 19. Mr. Garver was born at Waynesboro, Pa., on January 6, 1895, and entered railroad service on February 1, 1911, as clerk in the agent's office of the W. M. at Waynesboro. He served successively as telegraph operator, agent, chief clerk to superintendent transportation, chief clerk to division superintendent and assistant to superintendent transportation. He became superintendent transportation on January 1, 1949.

William C. Douglas, former assistant vice-president—traffic, of the NEW YORK CENTRAL, died on September 26 at his home in Chicago. He retired from direct railroad service in December 1948, and joined the Hulson Company as assistant to the president.

F. M. Rivinus, 69, general counsel of the NORFOLK & WESTERN at Roanoke, Va., died recently. Mr. Rivinus was born at Germantown, Pa., on October 6, 1882, and was graduated from Harvard University in 1904. He entered railroad service in 1910 with the N. & W. as assistant solicitor and was appointed assistant general solicitor on January 1, 1917. Mr. Rivinus was promoted to general solicitor at Philadelphia in June 1919, transferring to Roanoke in May 1931. He became general counsel on July 1, 1936.

F. M. Rivinus

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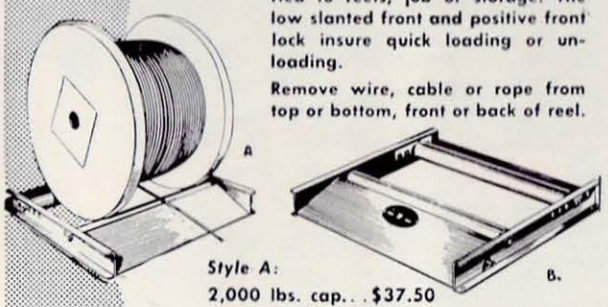

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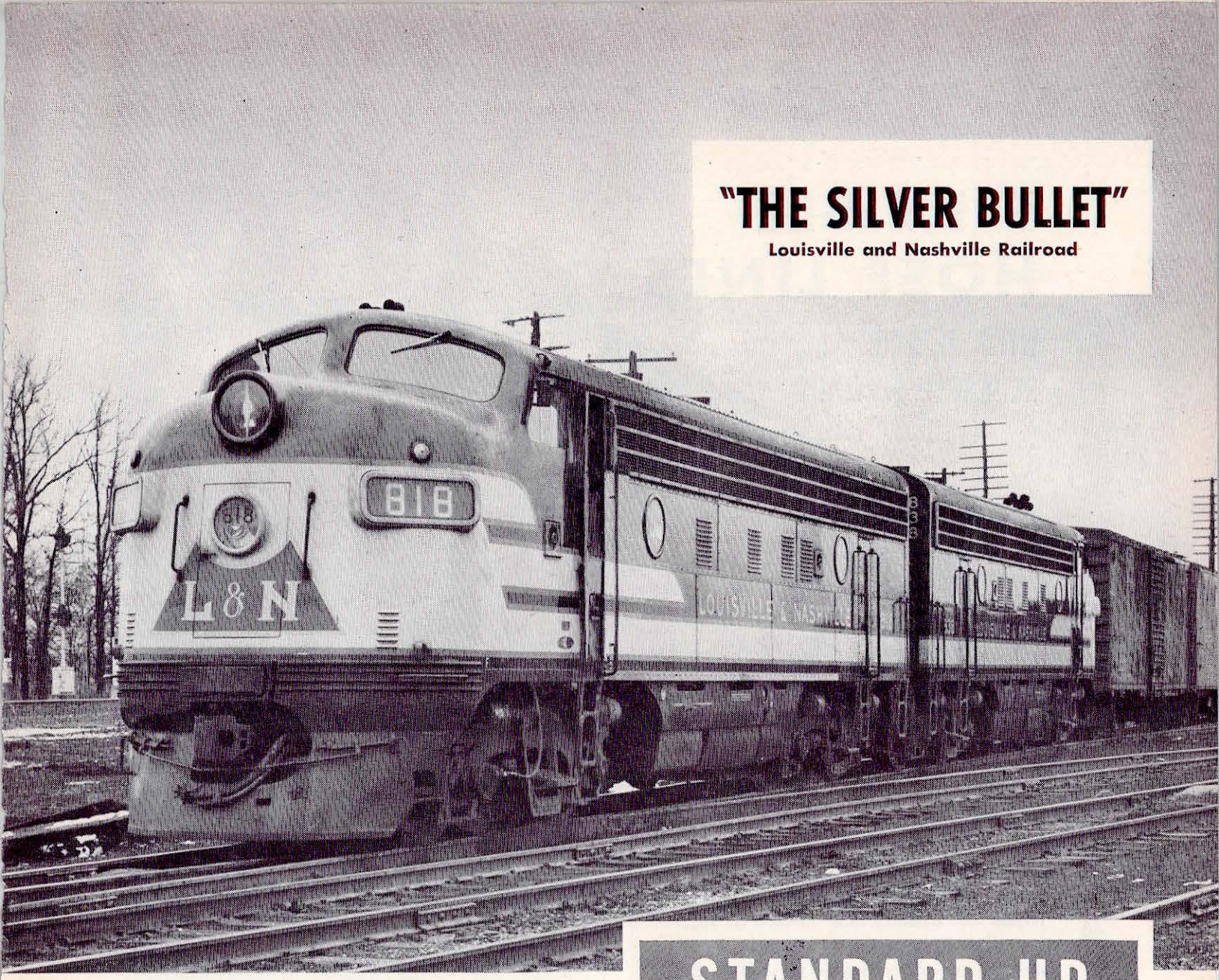
JAMES G. LYNE

Sworn to and subscribed before me this 20th day of September, 1951.

EDMUND J. PUYDAK

[SEAL] (My commission expires March 30, 1953)



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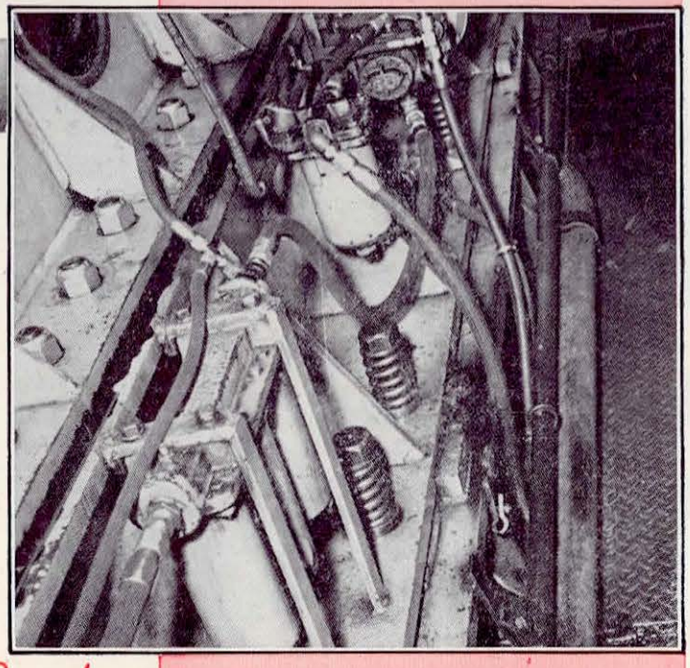

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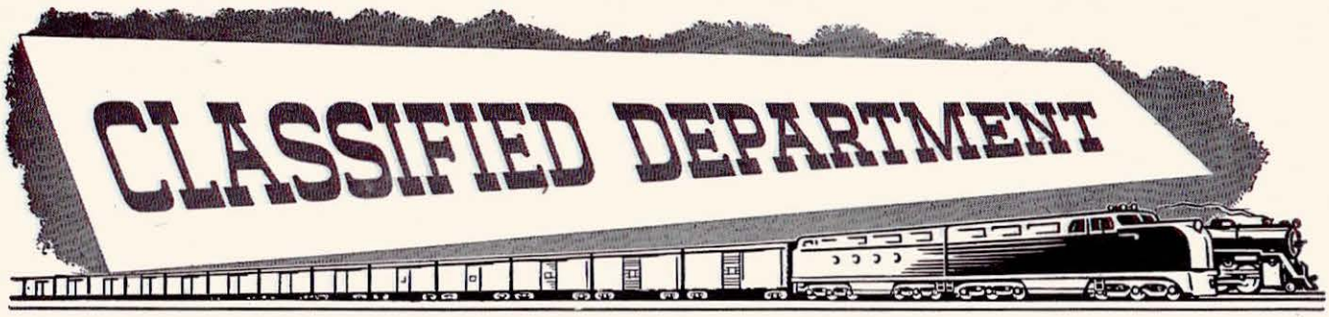

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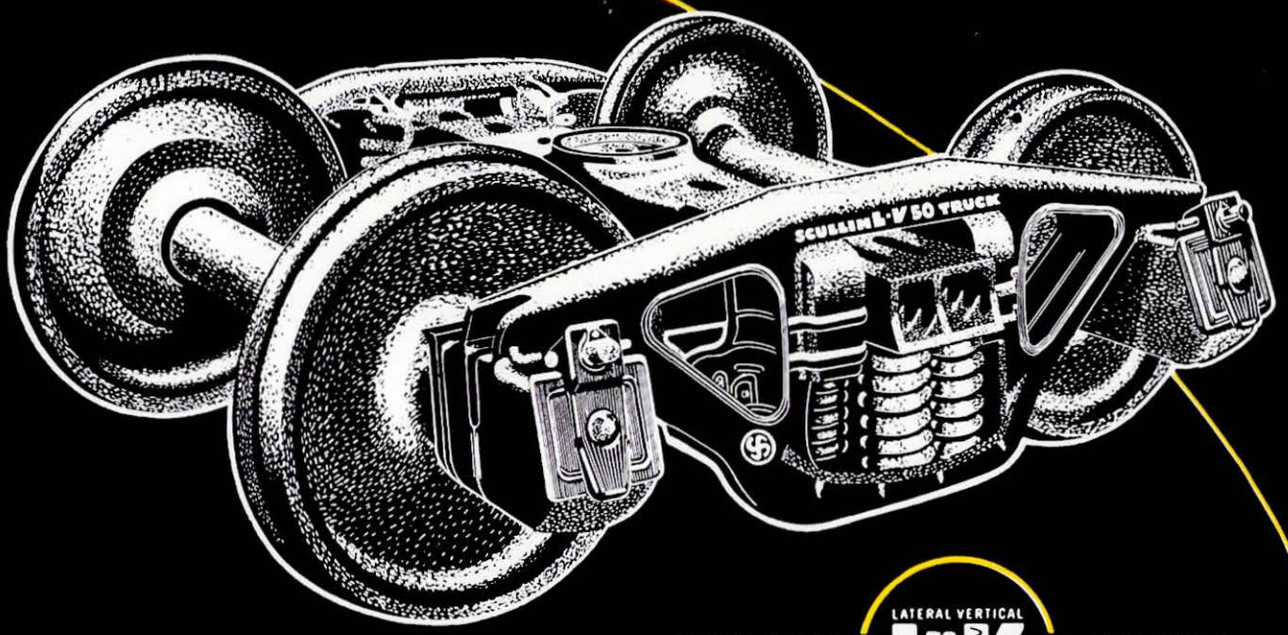

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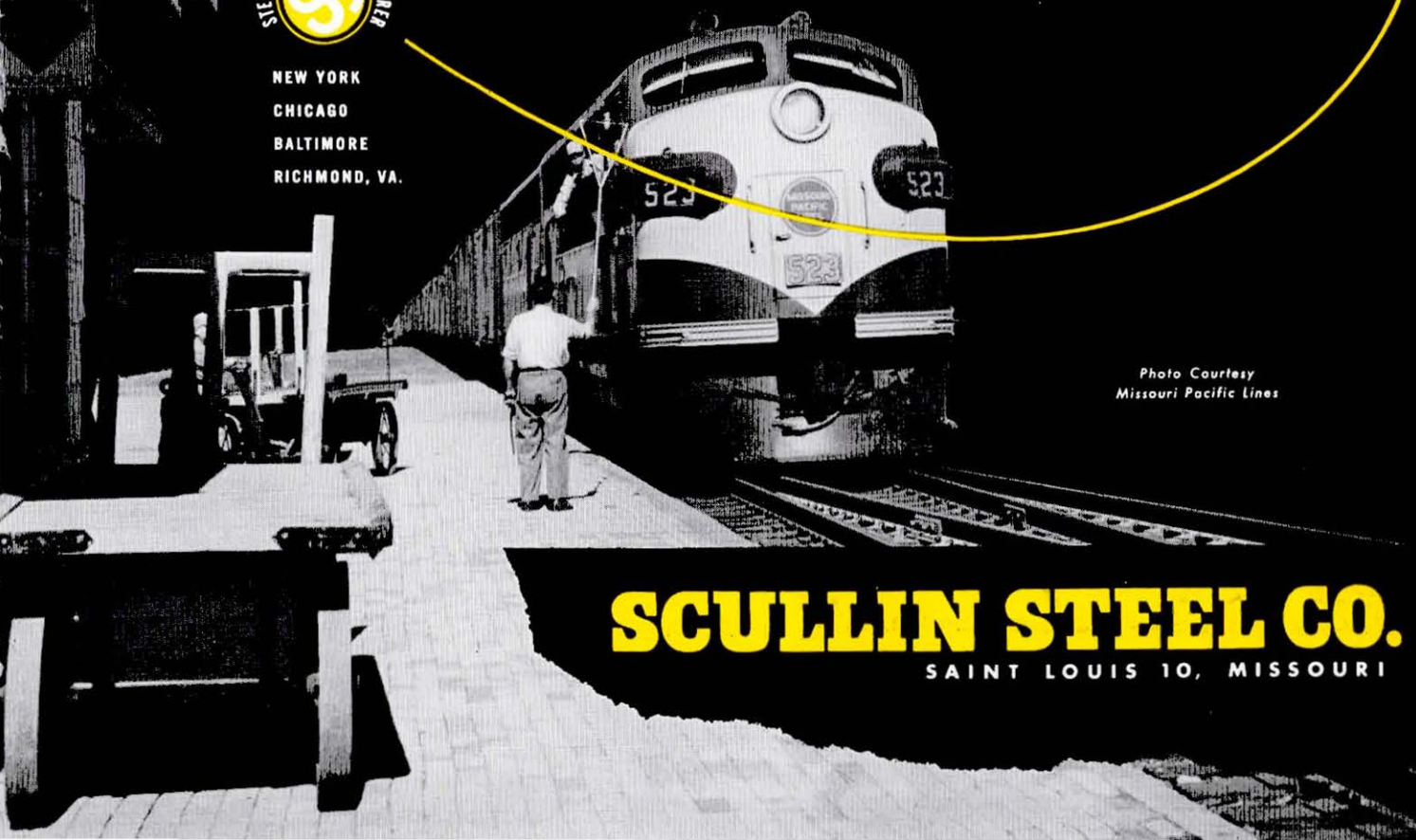

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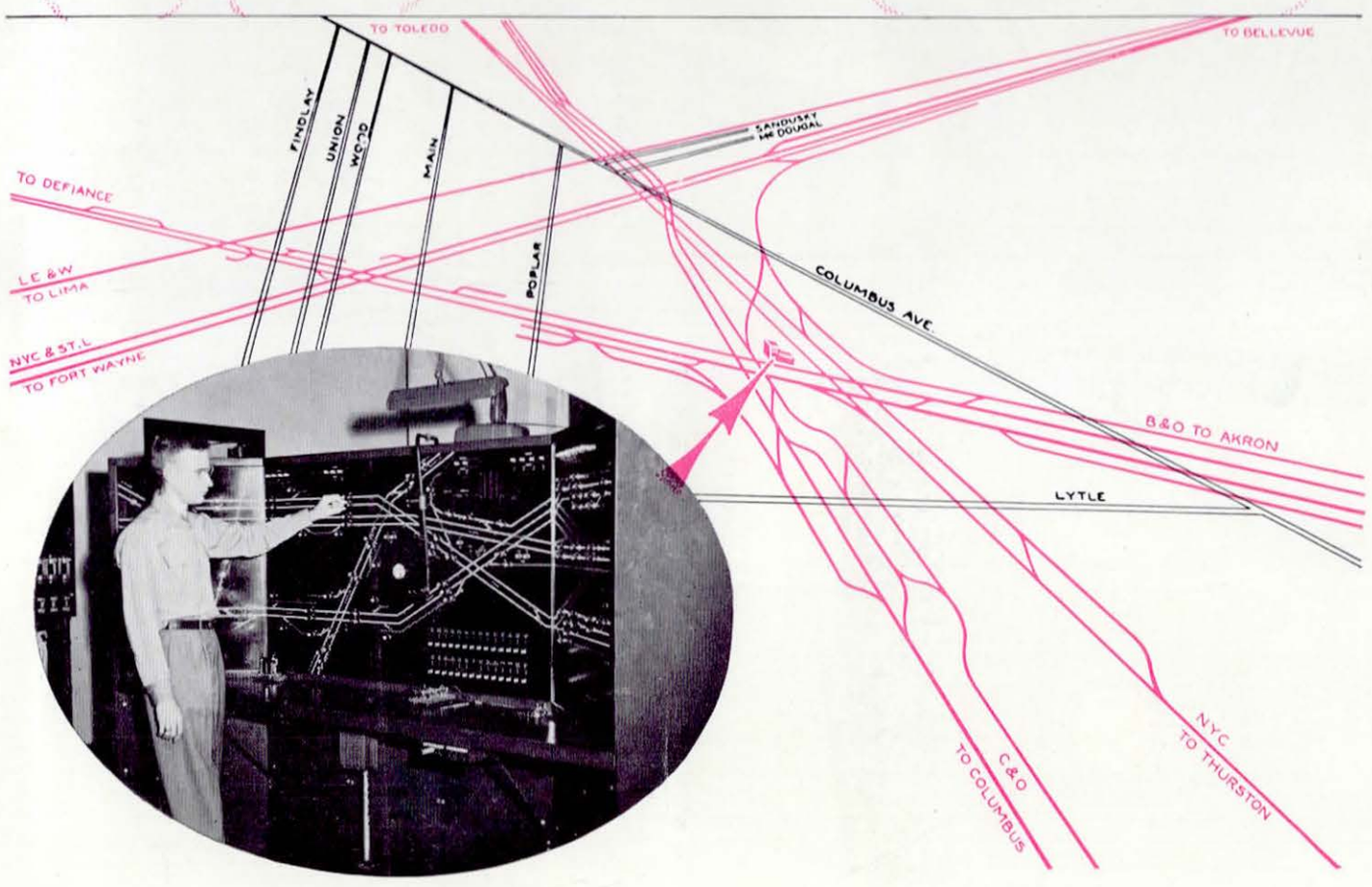

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